RANCHO SANTA ANA BOTANIC

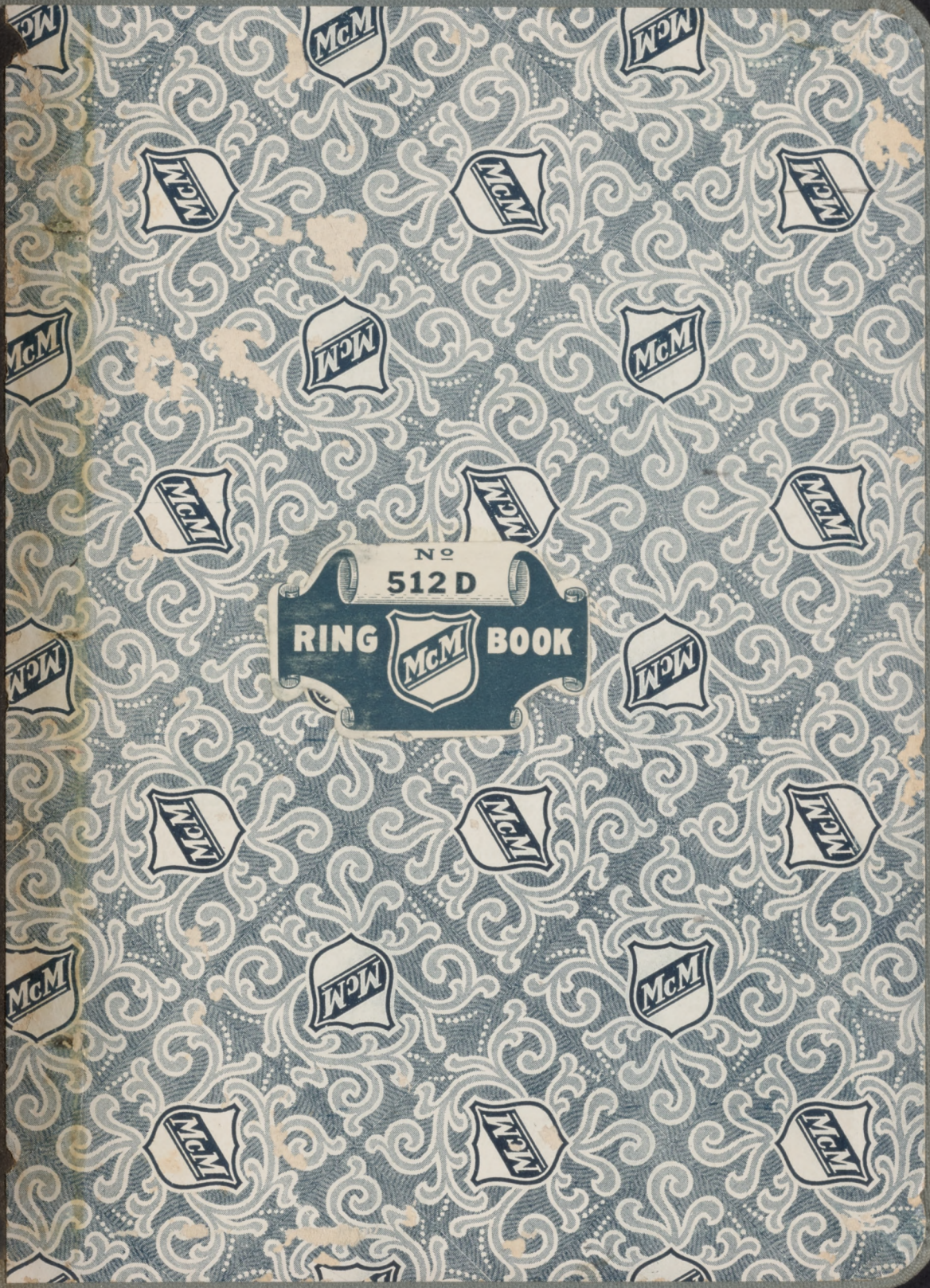
GARDEN

FIELD NOTES NOS. 1-~~1415~~ 1660

(J.T.Howell)

Collector: J.T. Howell

1-1663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FIELD NOTES----Rancho Santa

Ana Herbarium.

1927.

All specimens reported in this book were collected by J. T. Howell unless otherwise stated.

FIELD NOTES.

Howell's nos.
(2400)

1. Sambucus glauca Nutt.

Round-topped tree with outer branches recurving and touching ground, 15--20 ft. high. Trunks several from near ground, the oldest rough with slightly fissured brownish-gray bark. Leaves on robust shoots of this season's growth larger and irregularly bipinnate. Inflorescence nearly flat. flowers yellowish or creamy-white, fragrant. In sandy soil near orchard 1 near gate. June 1, 1927.
H-1 Orchard #1 near gate R.S.A.

2. Diplacus longiflorus Nutt. (2401)

Straggling shrubs, branches from base, erect or spreading, 2--3 ft. high. Bark on woody stems becoming shreddy. Upper side of leaves glandular-shining, not sticky; lower side sticky-pubescent as is also the calyx. Corolla-lobes yellow-orange; roof of throat same color as lobes, lower side white with two orange splotches on ridges running into throat from sinuses on either side of lower middle lobe. On east slope near preceding with Salvia apiana, Artemisia californica, Eriogonum sp., Eriophyllum confertiflorum, Castilleja oblongifolia, Lotus scoparius, all of which grow in open formation with grasses and herbs between. June 1, 1927.
H-2 Orchard #1 near gate R.S.A.

3. Eriophyllum confertiflorum. (2402)

Stems several, suberect or ascending from perennial base. Lower cauline leaves dried but similar to upper cauline leaves which are still green. Flowers yellow. Ray mostly 3--5. With preceding. June 1, 1927.
Orchard #1 near gate R.S.A.

(2403)

4. Lotus scoparius. (Nutt.) Ottley

Much-branched, bushy plant 2--3 ft. high, woody at very base; bark thin, reddish-brown. Flowers clear yellow when first open, taking on a reddish tinge at maturity and drying an orange or yellow-brown. Beaks of legumes red. With preceding. June 1, 1927.

Orchard #1 near gate R.S.A.

5. Salvia apiana. Jepson (2404)

Shrubby plants from branched woody base which is henerally low, the flowering branches growing to a height of 4--8 ft. above the ground. Flowering branches from the densely feafy ends of sterile branches of preceding year. Stems and calyces sticky glandular with rank minty odor. The leaves coriaceous. Flowers with lower lip up-turned, closing the throat, the lobes of the lower lip recurved, the small, entire, lateral lobes tending to roll under the large, expanded, erose-marginged middle lobe. Flowers of different plants of two colors: the one pure white except for small purple blotch on claw of lower middle lobe, the other conspicuously and beautifully purple-dotted. The middle lobe on almost all flowers has its margin up-turned, the center part of the lobe becoming dome-shaped. From the front the effect produced by the lower lip is like that of a dome over a pulpit with short walls on either side. With preceding. June 1, 1927.

Orchard #1 near gate R.S.A.

6. ~~Aster menziesii~~. Erigeron foliosus Nutt. (2405)

Stems weak and declining or ascending among bushy plants. Rays purple, disk yellow. In gravelly soil near top of ridge above preceding. With preceding plants and Eriogonum fasciculatum, Opuntia, Galium angustifolium. June 1, 1927.

Orchard #1 near gate R.S.A.

(2406)

7. Encelia californica. Nutt.

Much-branched straggling shrub 2--3 ft. high. Heads with yellow rays and black disk. Nearly past flowering stage so many heads not well developed. Near preceding on south facing slope above orchard 8. June 1, 1927.
South slope above Orchard #8 R.S.A.

(2407)

8. Eriogonum fasciculatum var. foliolosum. Stokes.

Low dense bush 1--2 1/2 ft. high with woody base. Leaves with revolute margin. Perianth-segments white with reddish line down center and with reddish base. On very rocky, gravelly slope with preceding. Variable as to size of plant and spread of the rays of inflorescence. June 1, 1927.
South slope above Orchard #8 R.S.A.

9. Hugelia virgata. Benth. (2408)

Flowers a true, deep blue with white throat. Growing with preceding in sandy or gravelly open places between the clumps of shrubby plants.
June 1, 1927.
Along road in Botany Garden.

(2409)

10. Hasseanthus variegatus (Wats.) Rose.

With preceding. The leaves have already dried completely and the flowering stalk is undoubtedly deriving food and moisture from the bulbous root. Flowers pale yellow. June 1, 1927.
South slope above Orchard #8 R.S.A.

(2410)

11. Castilleja oblongifolia. Gray.

In dry grass and among low shrubs of Artemisia, Lotus, Salvia, etc. where nos. 2 to 6 were collected. Ends of bracts and calyx lobes brilliant red. Inflorescence viscid-pubescent.
June 2, 1927.
Orchard #1 near gate R.S.A.

(2411)

12. Chaenactis glabriuscula. DC,

On the sandstone bluffs in sandy soil between the house-site and new orchard (no. 8). Flowers yellow. The marginal flowers with three outer corolla-lobes enlarged and spreading, the two inner little larger than normal center flowers and erect. Leaves on smaller plants linear, entire; on larger plants leaves with linear, pinnate segments. June 2, 1927.
between house-site and Orchard #8 R.S.A.

(2412)

13. Bebbia juncea (Benth.) Greene. Decumbent, spreading shrub about 1 ft. high, clinging to the very steep sandstone bluffs near preceding. Flowers yellow, no rays. June 2, 1927.
west of house in Botany Garden.

(2413)

14. Stipa parishii Vasey

From a dense tuft on the exposed sandstone bluffs near preceding just below house-site.
June 2, 1927.
South of house, Botany Garden.

(2414)

15. Centaurium venustum. (Gray) Rob.

On the flat just to south of house-site in very level place where water might have stood in winter. Flowers with corolla-lobes lavender-pink, throat white as well as base of corolla-limb. Corolla salverform. Among dried grasses, Hemizonia sp., Lotus sp., Eremocarpus. Not common. June 2, 1927.
South of house, Botany Garden.

16. Bloomeria crocea. (Torr.) Coy.

In grassy open among shrubs of Salvia, Diplacus, Artemisia, etc. on canon side to north of house-site. Exposure to north. Soil sandy. Flowers
North of House, Botany Garden.

yellow, mid-vein of perianth segments greenish, not brownish. June 2, 1927.

(2415)

17. Astragalus leucopsis T. & G.

From perennial, woody base, up to 3 ft. high. The branches and pods of old specimens already dried, the seedlings of this season occasionally still in bloom. Flowers greenish or yellowish -white. Pods inflated, the upper suture often somewhat inflated, the upper suture often somewhat indented. On sandy benches or sandstone bluffs east of house-site. June 2, 1927.

East of house, Botany Garden.

18. Galium angustifolium. Nutt. (2416)

Bushy plants from woody base with silvery-scarious, shreddy bark, when growing among bushes attaining a geight of about 3 ft. Flowers greenish. Longest leaves 3/4 to 1 in. long. Near base of the sandy ridge south-east of house-site. June 3, 1927.

South east of house, Botany Garden

19. Philibertia heterophylla.( ) Jepson.

Twining herb with perennial base. Corolla-lobes reddish-purple, with white, ciliate margins. Hoods shining, white. With preceding. June 3, 1927.

Southeast of house, Botany Garden.

20. Cirsium occidentale.(Nutt.) Jepson.

Plants 3--4 ft. high. Growing in an oak thicket on sandy ridge south-east of house-site. Basal leaves dried. Flowers bright reddish-purple. June 3, 1927.

Southeast of house. Botany Garden.

(2417)

21. Phacelia ramosissima var. suffrutescens. Parry

Flowering stems 1 1/2--3 ft. high from perennial woody base, erect. Herbage with 2 or 3 kinds of hairs, one of which is glandular. Corolla campanulate, lobes horizontally expanded. The expanded lobes pale lavender with perhaps yellowish tinge near throat. In oak thicket growing up through it or on its edge. Mostly on north-east slope of sandy ridge with preceding.
June 3, 1927.
Southeast of house, Botany Gdn. (2418)

22. Lomatium utriculatum (T+G) C+R.

In clay or adobe soil, baked and hard, on level near house-site. No fresh flowers seen, those dried yellow. Among dried grasses and Hemizonia.
June 3, 1927.
Near house Botany Garden.

(2419)

23. Lotus salsuginosus var. brevivexillus. Ottley

In clay and sandy soil on top of ridge running east of house-site. Leaves succulent. Banner yellow, tinted with red on back; wings yellow, whole flower drying reddish. Most of the plants nipped perhaps by squirrels. In opens between bushes of Salvia, Lotus, Encelia, etc. June 3, 1927.
Near house. Botany Garden.

24. Cuscuta californica. choisy (2420)

On southern slope of same ridge as preceding, parasitic of Salvia mellifera which was growing on sandstone outcrop. The stems have largely with- erect leaving the flowery clusters suspended on the shrub. It might be that the drying up of the stems precipitates the main blooming period, the great number of blossoms as found on this
Parasitic on Salvia mellifera near house.
Botany Garden

specimen not seen on specimens in which the stems of the parasite are still fresh. Flowers waxy, cream-colored, slightly fragrant. Also commonly parasitic on Eriogonum fasciculatum.
June 3, 1927.

(2421)

25. Salvia leucophylla. greene.

Herbage not sticky and not so strongly scented as Salvia apiana. Flowers lavender in color, not spotted, often coloring hillsides. Upper lip well developed with two entire lobes. Lower lip extending straight out, the middle lobe of the lower lip erose. Throat hairy inside and outside. In gravelly wash below preceding but more abundant on steeply sloping hillsides, often forming extensive thickets 3--4 ft. high.
June 3, 1927.
near house, Botany Garden.

(2422)

26. Anemopsis californica. (nutt.) Hook.

In wet and boggy place on stream bank in west fork of Aliso Canon, growing in shade under Salix, Quercus agrifolia and Platanus racemosa. Bracts white or shaded with pink.
June 5, 1927.
West fk. Aliso Canyon. R.S.A.

27. Salix laevigata Bebb. (2423)

Along stream with preceding, becoming a tall well developed tree with thick trunk and dark, much-roughened bark.
June 5, 1927.
R.S.A.

(2424)

28. ~~Torilis~~ Torilis nodosa. (L.) Gaertn.

In shady place among grasses in dry, well drained

ground on bank of stream under Salix, Quercus, and Platanus, same locality as preceding. Flowers white. June 5, 1927.
West fk. Aliso Canyon. R.S.A. (2425)

29. Amsinckia douglasiana DC.

On open grassy hillside, slope to north, in branch of west fork of Aliso Canon. Most of other herbaceous things now dry. Flowers orange-yellow with reddish-brown spot or spots in corolla-throat. Herbage hispid-sticky.
June 5, 1927.
Branch of west fk. of Aliso Canyon. R.S.A. (2426)

30. Godetia quadrivulnera (Dougl.) Spach.

With preceding in very dry ground. Corolla lavender-rose, fading paler at base; tips of lobes with pruple blotch. June 5, 1927.
branch of west fk. of Aliso Canyon. R.S.A. (2428)

31. Pentstemon cordifolius. Benth.

Along creek with nos. 26--28. Climbing 12 ft. into shrub of Baccharis veminea, not twining. Corolla maroon on outside with yellow tube. Inside orange-red. Filaments and fifth stamen yellow. In the upper part of this same canon it is abundant and forms thickets in the shade of oaks on the steep northern slopes. W. Fk. Aliso Canyon. R.S.A. June 5, 1927.
(2429)

32. Mimulus brevipes. Benth.

Flowers lemon-yellow with reddish-brown spots in inner part of throat and with two conspicuous hairy ridges in lower part of throat. Plants growing in packed clay soil between bushes of Eriogonum fasciculatum, Ato

Artemisia californica, Diplacus longiflorus, etc., on southern slope between orchard #4 and railroad. June 5, 1927. R.S.A.

(2430)

33. Pentstemon antirrhinoides. Benth.

Flowers lemon-yellow, upper lip strongly arched and rounded, carinate outside. Inside lemon-yellow, outside yellow tinted with reddish, especially on upper side, or red none. Filaments yellow. On east slope at east end of orchard #4 with Artemisia Californica, Eriogonum fasciculatum, Salvia mellifera, Lotus scoparius, Baccharis viminea, Sphaeralcea.
June 5, 1927. R.S.A.

(2431)

34. Antirrhinum coulterianum var. nevinianum (Gray) Jepson.

Flowers white, palate of lower lip convex upward, sometimes tinted yellowish and with or without purple specks on sides of convex part. End of inflorescence becoming twining. With preceding in open clay soil between shrubs.
June 5, 1927. R.S.A.

(2432)

35. Phacelia hispida. Gray

In shaded bottom of a gulley near the railroad track between upper orchard and canal intake. Corolla-lobes lavender, the throat whitish with mottling specks of greyish. Scales white. Hairs of two kinds, the one long and hispid, the other short and glandular--rendering the plant almost viscid-slimy. In drier situations the corollas become dark blue. June 5, 1927. R.S.A. between upper orchard and canal intake.

(2433)

36. Chaenactis artemisiaefolia. Gray

Plants up to 3 ft. high with broad, much-branched inflorescence. Flowers white. Marginal corollas only slightly enlarged. Leaves succulent. On dry sandy eastern slope in gully near head of ditch along railroad, just to east of ranch.
June 5, 1927. R.S.A.

(2436)

37. Muhlenbergia microsperma. (DC.) Kunth.

Inflorescence reddish-purple, diffuse. In loose sandy soil on southern slope along railroad just to east of Rancho Santa Ana. The plant was growing in soil which had fallen in large masses from the chaparral-covered bluffs above.
June 5, 1927.

(2437)

38. Andropogon saccharoides Swartz.

Forming tufts and bunches up to 1 ft in diameter on eastern slope where 33 and 34 were collected. Soil hard and packed.
June 5, 1927. East of orchard #4, R.S.A.

(2438)

39. ~~Oenothera~~ Eulobus californicus. Nutt.

Flowers orange tinted with red. Leaves all fallen except bracts of inflorescence. Stem somewhat glaucous. With preceding.
June 5, 1927. East of Orchard #4
R.S.A.

(2439)

40. Salix ~~[illegible]~~ negra var. vallicola Dudley.

One of the five or six species of Salix on the broad sandy flats of the Santa Ana River bottom. From near the power house. Bark rough. Tree-like.
June 6, 1927. River bottom near power house. R.SA

(2440)

41. Salix argophylla Nutt.

In more open places than preceding and generally with the habit of a tall shrub.
June 6, 1927. River bottom near power house. R.S.A.

(2441)

42. Equisetum funstonii. A.A. Eaton.

In sand among stems of shrubby clumps in the Santa Ana River bottom near preceding.
June 6, 1927. Near power house. R.SA.

(2442)

43. Senecio douglasii DC.

On dryish grassy flats above general water level. Forming erect shrubby clumps up to 4 ft. high. Flowers yellow. Santa Ana River bottom.
June 6, 1927. Near power house. R.S.A.

(2443)

44. Salsola kali var. tenuifolia. G.F.W. Mey.

In sand where water ran earlier in the spring. Common annual hereabouts. Near preceding.
June 6, 1927. Near power house. R.S.A.

(2444)

45. Echinocystis macrocarpa Greene.

Rank annual vine, clambering over low bushes. Capsules large and those examined 4 or 6-celled. On dryish sandy flat above general whater level.
June 6, 1927. River bottom. R.S.A.

(2445)

46. Rosa californica. C & S.

Near preceding forming small thicket about 5 ft. high. Flowers very fragrant, petals pink. Santa River Bottom.
June 6, 1927. R.S.A.

(2446)

47. Croton californicus. Muell. Arg.

Forming rather dense bushes up to 2 1/2 ft. high, with erect branches. In grassy open in sandy soil near preceding, Santa Ana River bottom.
June 6, 1927. R.S.A.

(2448)

48. Sisymbrium altissimum. L.

Flowers yellow. Growing in deep shade near old river bed in dry sandy soil. North side of river 1/2 mile below canal intake, Santa Ana River bottom.
June 6, 1927. R.S.A.

(2449)

49. Amorpha fruticosa. L.

Banner deep and rich purple in fine contrast with the bright yellow anthers. Flowers fragrant. Low shrubs up to 5 ft. high with pleasant green foliage. In well drained, dry, sandy soil on Santa Ana River bottom near preceding.
June 6, 1927. R.S.A.

(2450)

50. Paeonia brownii. Dougl.

Fruit of 3 (or 2) follicles which are widely divergent. Foliage drying. On southern bank of the Santa Ana River south-west of canal intake near well developed stand of Opuntia on sandy river bottom floor.
June 6, 1927. R.S.A.

(2451)

51. Ribes speciosum Pursh.

Low shrub about 4 ft. high near preceding.
June 6, 1927. R.S.A.

(2452)

52. Eriogonum thurberi Torr.

Flowers pink or pink and white, the white in blotches. Outer calyx segments rounded, spreading, the inner erect and slender. In deep, almost pure sand on canal bank just below the canal intake.
June 6, 1927. Canal intake. R.S.A.

(2453)

53. Sitanion jubatum J.G. Smith.

Perennial, forming smalltufts. Inflorescence with purplish tinge. Growing in hard, dry ground near railroad tracks just back of ranch buildings. June 8, 1927. R.S.A.

(2454) T. & G.

54. Hemizonia fasciculata ~~Gray~~.

In dry, adobe soil on flat near building site in the garden. Flowers yellow. Shorter plants from undug ground, the tall specimens from loose ground along line of water pipe.
June 8, 1927. Botany Garden, near house.

(2455)

55. Chorizanthe staticoides Benth.

With preceding in undug ground. Herbage reddish-maroon; flowers deep rose color, the outer segments of the calyx with hairs on the mid-vein outside.
June 8, 1927. Botany Garden. Near house.

(2456)

56. Lotus humatus Greene.

With the preceding. Plants perfectly flat along ground. Flowers yellow, fading reddish. Herbage with a purplish tinge.
June 8, 1927. Near house, Botany Garden.

(2457)

57. Daucus pusillus Michx.

With preceding. June 8, 1927. Near house, Botany Garden

(2458)

58. ~~Gilia~~ Linanthus pharnaceoides Greene.

Near preceding in dry clay soil. Corolla broadly funnel-form, lobes spreading, lavender, each with 3 purple nerves.
June 8, 1927. Near house, Botany Garden.

(2459)

59. Salvia mellifera. Greene.

Shrubby plant up to 6 ft. high on steep sandy hillsides below the water-tank. Stamens becoming considerably exserted, the lower end of the anther ~~cibbectuve sybykate abd cibsoucyiys~~ connective subulate and conspicuous. Corolla whitish or pale lavender al also style and filament.
June 8, 1927. Botany Garden.

(2460)

60. Salvia mellifera var.

With preceding and only two specimens seen. Corolla pruple (deeper then inS. leucophylla), style and filaments purple. Anther-connective without free end but as in S. leucophylla. This form is perhaps a hybrid between S. mellifera and S. leucophylla.
June 8, 1927. Botany Garden.

(2461)

61. Chorizanthe staticoides Benth.

Robust specimens from sandy soil above water-tand. June 8, 1927.

K

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(2462)

62. Convolvulus occidentalis Gray.

Stems many and long, twining, from crown of perennial root. Corolla white, the outside with pink bands below the lobes. In dry clay soil along the road between reservoir and house-site, slope steep to the south.
June 9, 1927. Botany Garden.

(~~2464~~)

63. Erodium cicutarium L'Her.

Introduced plant common along the roads of the garden. Near preceding.
June 9, 1927. Between reservoir and house in Botany Garden.

(2463)

Biennial or perennial. 64. Malacothrix altissima Greene

Tall annual, sometimes over 5 ft. high. Leaves variable, uppermost becoming narrower and more deeply lobed. Flowers white above and pink or rose below, or the base of center flowers becoming pale yellow. Hot, dry slopes along road with no. 62.
June 9, 1927. Botany Garden.

(2465)

65. Stipa lettermanii (?)

Inflorescence yellowish-green when nearing maturity. Along road in loose soil washed down from bank above. In normal conditions in undisturbed ground the seed of this and following grasses had fallen.
June 9. 1927. Botany Garden

(2465)

66. Bromus rubens L.

Inflorescence dull purplish when mature. With preceding. June 9, 1927. Along road in Botany Garden.

(2466)

67. Bromus rigidus Roth.

Inflorescence dull purplish when mature. With preceding. June 9, 1927. Along road in Botany Garden.

(2467)

68. Stipa lettermanii (?)

Inflorescence with shining and purplish tinge because of color and luster of the glumes. June 9, 1927. With preceding. Along road in Botany Garden.

(2468)

69. Solanum douglasii Dunal.

Perennial, herbaceous bushes up to 3--4 ft. high. Corolla-lobes dull whitish becoming brownish and greenish at base. Along the road with preceding in clay soil mixed with gravel from underlying gravel beds. June 9, 1927. Along road in Botany Garden.

(2469)

70. Plantago insularis Eastw.

Along the road in clay soil washed down from the bluffs above, dry, baked. Slope to south. Near preceding. June 9, 1927. Along road in Botany Garden.

(2470)

71. Euphorbia polycarpa Benth.

Outer part of bracts white with a black-purple spot at base. Forming prostrate mats, rarely more than 6 in. in diameter, in clay soil. With preceding and in road bed.
June 9, 1927. Along road in Botany Garden.

72. Emmenanthe penduliflora Benth.

Much-branched annual of spring, the specimen late blooming because it grows in loosened ground near water tank. Corolla lemon-yellow. Herbage with glandular hairs.
June 9, 1927. Botany Garden, along road.

(2471)

73. Hugelia virgata Benth.

Extra large size of plants due to loosening of of ground or to injury of seedlings, perhaps, as some of the plants show broken main axes. Near preceding and with Chorizanthe (no. 61) which was collected yesterday.
June 9, 1927. South slope above Orchard #8, R.S.A.

74. Stephanomeria virgata Benth.

Ligules whitish or lavender above, rose-color below. In dry clay or sandy clay soil along road and on steep southern slopes below road to east of house-site. Botany Garden.
June 9, 1927.

(2472)

75. Cotyledon caespitosa Haw.

Basal leaves drying, those still fresh slightly glaucous. Flowers of 2 colors, one with corolla greenish-yellow, the other with corolla greenish-yellow strongly tinged with red. Both growing on steep hillside with preceding, the plants generally in a clump of Eriogonum fasciculatum, Salvia mellifera, Lotus scoparius, etc. June 9, 1927. East of house, Botany Gdn.

76. Spergularia macrotheca. (Hornem.) Heynh.

Collected on alkaline flats at the Bryant ranch near Long Beach by E. R. Johnson. Flowers pink or lavender. El. 50-100 ft. June 10, 1927.

(2473)

77. Elymus condensatus Presl.

Along road between ranch houses and Horseshoe Bend, Rancho Santa Ana. As tall as 9 ft. June 10, 1927. Collected by E. R. Johnson. El. 500 ft.

(2474)

78. Pentstemon Spectabilis Thurber.

Herbage glaucous. Corolla-lobes deep blue, tube lighter in color and reddish-purple. In coarse sandy soil in first native vegetation east of ~~Colton~~ on Highland Ave. Growing with Salvia apiana, Rhus diversiloba and R. trilobata, Prunus ilicifolia, Rhamnus crocea. June 11, 1927. El. c. 1,000 ft.

upland

(2475)

79. Antirrhinum coulterianum Benth.

Corolla whitish or with yellowish tint, with or without small dark spots on lower lip. With preceding. June 11, 1927.

80. Calochortus plummerae Greene.

Corolla-segments pinkish-lavender, paler at base, hairy on inside but not hairy at base below gland or on upper part; the margin denticulate. Hairs golden-yellow, arising from a purple speck and purple-tipped. With preceding. June 11, 1927.

(2476)

81. Cercocarpus ~~ledifolius~~ betuloides Nutt.

Shrubs, those seen under 7 ft. high. With preceding. June 11, 1927.

82. Prunus ilicifolia. Walp. (2477)

Shrubs about 6--7 ft. tall. Flowers mostly past, creamy white. With preceding. June 11, 1927.

83. Rhus trilobata. Nutt. (2478)

Shrubs 3--5 ft. high. Fruit bright orange-red to deep red, the outside sticky with a very acid juice. With preceding. June 11, 1927.

(2479)

84. Helianthemum scoparium. Nutt.

One to 2 ft. high. Flowers bright yellow. With preceding. June 11, 1927.

(2480)

85. Navarretia atractyloides H. & A.

Flowers pinkish fading dark blue. With preceding. June 11, 1927.

(2482)

86. Chorizanthe parryi Wats.

Flowers white, calyx-lobes with denticulate margin. Flowers well exserted from the involucre. With preceding. June 11, 1927.

(2483)

87. Monardella lanceolata Gray.

Flowers deep bluish-purple. Herbage with very agreeable minty smell. Bracts of involucre with glistening glandular pubescence. With preceding. June 11, 1927.

(2484)

88. Rhamnus crocea. Nutt.

Shrubs about 6 ft. high. With preceding. June 11, 1927.

The above group of plants was collected on Highland Avenue in a patch of native vegetation on part of one of the rocky alluvial fans which extend out from the canons of the very abrupt and precipitous southern slopes of the San Gabriel Mts. Nearer the mountain front great numbers of Yucca whipplei are to be seen. Where very abundant and when distant, the appearance is that of a cemetary with many monuments.

(2485)

89. Trichostema lanatum Benth.

Inflorescence deep purple. Lower lip with white sopt, this with purple dots. Herbage fragrant. On Cajon Pass highway in lower part of the canon. June 11, 1927. El. 2,700.

(2486)

90. Pectocarya setosa Gray.

In sandy soil on old road between Cajon Pass and Hesperia, just over the pass on the Mojave Desert side. June 11, 1927. El. 3500.

(2487)

91. Oxytheca trilobata Gray.

Main stem a little over an inch high, erect, then divaricately and widely branching. Calyx-lobes white, with reddish mid-vein, the margin erose. With preceding.
June 11, 1927.

(2487 A)

92. Langloisia schottii Greene.

Plants forming low dense tufts. Flowers pinkish when fresh, fading to bluish on drying. With preceding. June 11, 1927.

(2488)

93. Garrya veatchii Kell.

Shrubs up to 6 ft. high. Near preceding.
June 11, 1927.

(2489)

94. Lotus leucophyllus Greene.

Low and spreading. Flowers yellow fading brownish. In sandy soil along same road as preceding but about 1 mile below Cajon Pass.
June 11, 1927.

(2490)

95. Mirabilis laevis var. glutinosa Jepson.

Flowers pale purple-rose. Herbage viscid. Near preceding. June 11, 1927.

(2491)

96. Ericameria monactis McCl.

Flowers yellow. Low, rounded bush about 2 ft. high. Near preceding. Glandular-sticky. June 11, 1927.

(2492)

97. Acamptopappus sphaerocephalus Gray.

Flowers yellow fading pale lemon-yellow when dry. Bush about 2--3 ft. high. With preceding. June 11, 1927.

(2493)

98. Lessingia lemmonii Gray.

Flowers yellow. Herbage glandular with odor of tar-weeds. Mostly very young plants, later becoming much and intricately branched. With preceding. June 11, 1927. Ee. 3400

(2494)

99. Prunus fasciculata. Gray.

Somewhat rigid shrub 6--8 ft. tall near preceding. June 11, 1927.

(2495)

100. Salazaria mexicana Torr.

Shrub 2--3 ft. high. Calyx inflated, tan or pale yellow in color, or distinctly colored with purple. Upper lip of corolla pale blue or whitish, lower lip very deep blue-purple. Common along road between Cajon Pass and Hesperia. June 11, 1927.

101. Salvia carnosa Hough.

Bracts of inflorescence colored reddish-purple. Flowers deep bluish-purple. With preceding. June 11, 1927. El. 3200 ft.

(2496)

102. Larrea tridentata var. glutinosa. Jepson.

Shrub, the herbage with strong smelling, sticky, glandular excretion. Flowers clear yellow. On road between Hesperia and Victorville, near Hesperia. June 11, 1927. El. 2,700 ft.

(2497)

103. Atriplex canescens James.

On road between Hesperia and Victorville, about 1 mile south of Victorville. El. c. 3000. June 11, 1927.

(2498)

104. Ephedra viridis Cov.

Much-branched brushy shrub in Mojave Desert about 9 miles south-east of Victorville. June 11, 1927.

(2499)

105. Calochortus kennedyi. Porter. G-124

G-124

Capsules from the open fields at the Bonadiman ranch about 12 miles south-east of Victorville. June 12, 1927.

(2500)

106. Eriogonum trichopodum Torr.

Annual herb very common in fields with preceding, showing considerable variation in amount of inflation of stem. The smaller plants might or might not become inflated. June 12, 1927.

(2501)

107. Eriogonum molestum var. davidsonii Jepson.

Calyx-lobes with brownish or greenish mid-vein. With preceding. June 12, 1927.

108. Hugelia virgata Benth.

Flowers blue with paler or whitish throat and tube. With preceding.
June 12, 1927.

(2502)

109. Lycium cooperi Gray.

Rigid shrub 2--4 ft. high in Mojave Desert north-east of Bonadiman Ranch, towards Deadman's Point. Flowers all dried. June 12, 1927.

(2504)

110. Stephanomeria exigua Nutt.

Flowers pinkish-lavender. Common in granitic sandy soil at Deadman's Point, a great outcrop of granite rising abruptly from level floor of desert about 12 miles east of Victorville.
June 12, 1927. Ea. c. 3000ft.

(2505)

111. Franseria dumosa Gray.

With preceding.
June 12, 1927.

(2506)

112. Astragalus lentiginosus Dougl.

Flowers lavender-blue. Pods short-oblong, inflated, upper suture strongly indented, the

slightly so. With preceding.
June 12, 1927.

(2507)

113. Cuscuta denticulata Engelm.

Flowers waxy-white. Host growing with preceding.
June 12, 1927.

(2508)

114. Eriogonum angulosum Benth.

Outer calyx-lobes reddish-purple with white margins, roundish, inner slender, white with reddish mid-vein. Near preceding in sandy soil. June 12, 1927.

(2512)

115. Plantago xerodea Morris.

With preceding.
June 12, 1927.

116. Chorizanthe watsonii T.& G.

Flowers yellow, very slightly exserted from involucre. Stem disjointing easily. Near preceding. June 12, 1927.

(2514)

117. Lupinus odoratus Heller.

Herbage succulent. Flowers deep purple, the banner with white or greenish-white spot in central and middle lower part, the border purple. With preceding.
June 12, 1927.

118. Eschscholtzia minutiflora Wats.

Flowers golden-yellow. Near preceding.
June 12, 1927.

(2515)

118A. Chaenactis stevioides H. & A.

Flowers white. Near preceding.
June 12, 1927.

(2516)

119. Eriogonum fasciculatum var. polifolium J. & G. Gray.

Rays of inflorescence very long and spreading.
With preceding. June 12, 1927.

120. Malacothrix californica var. ~~conchoides J. & G.~~ glabrata Vatt.

Flowers deep lemon-yellow. Like the lupine (no. 117) this plant has apparently experienced a rejuvenation after the vernal flowering season was over. With preceding.
June 12, 1927.

121. Nicotiana trigonophylla Dunal.

Corollas whitish. Growing in clefts of and in shade of granite rocks and boulders at Deadman's Point. June 12, 1927.

(2517)

122. Oenothera decorticans Jepson. alyssoides var.

Low and spreading plants with white flowers.
With 120. June 12, 1927.

(2519)

123. Stephanomeria runcinata Nutt.

Flowers pale pinkish-lavender. Plants forming an intricately and densely branched bush growing in the clefts of granite rock at Deadman's Point. June 12, 1927.

124. Mentzelia affinis Greene. G-128

G 128

Corollas yellow with characteristic satiny luster. With no. 120. June 12, 1927.

(2522)

125. Eriogonum mohavense Wats.

In dry sandy soil on road between Victorville and Hesperia about 1 mile from Victorville. Flowers yellowish-green, the medvein brownish. June 12, 1927. El. 2,700 ft.

126. Eriogonum inflatum Torr. & Frem.

Flowers greenish. Biennial or perennial. With preceding. June 12, 1927.

(2523)

127. Eriogonum baileyi Wats. (?)

Flowers yellow. With preceding. June 12, 1927.

127A. Oryzopsis hymenoides. Ricker. G-131

G 131

Greenish-gray bunch grass growing with preceding. June 12, 1927.

128. Stillingia linearifolia (2524) Wats.

With preceding.
June 12, 1927.

129. Eurotia lanata (2525)

With preceding.
June 12, 1927.

(2526)

130. Salazaria mexicana Torr.

Calyces whitish or very pale yellow. Flowers whitish or very pale yellow. No touch of purple color about the plant. Although a great number of specimens were growing around the one collected no other albino was seen. About halfway between Victorville and Hesperia with Yucca brevifolia. El. 2,700 ft.
June 12, 1927.

131. Aster tortifolius Gray.

Rays lavender. Near preceding.
June 12, 1927.

(2527)

132. Chorizanthe thurberi. Wats.

Plants an inch or so high, the main part of the stem erect, the branches spreading horizontally and the involucres pendent. Flowers white. June 12, 1927. With preceding.

2533

133. Juniperus californica Carr.

On road between Hesperia and Cajon Pass, forming low rounded trees or tall shrubs.
June 12, 1927. El. 3,200 ft.

(2534)

134. Sisymbrium altissimum L.

Along road between Hesperia and Cajon Pass.
Flowers yellow. June 12, 1927. El. 3200 ft.

(2535)

135. Stenotopia S. linearis var. interior McBr.

Low, dense shrub 2--3 ft. high along road
between Hesperia and Cajon Pass.
June 12, 1927. 3,200 ft. el.

(2536)

136. Sambucus glauca var. arizonica Sarg.

Flowers in flat-topped clusters, pale creamy-
white. On road between Hesperia and Cajon
Pass, a short distance below the Pass.
June 12, 1927. El. 3,600

137. Asclepias Sp.

With preceding; rather low, spreading plants.
June 12, 1927. El 3,600 ft.

(2537)

138. Eriophyllum confertiflorum Gray.

Flowering stems from low dense clumps of
branching base. Flowers with broad rays,
showy. Near preceding. June 12, 1927. El. 3600 ft.

(2538)

139. Arctostaphylos glauca Lindl.

Shrubs 5 ft. high. Berries very sticky.
At point where highway crosses Cajon Pass.
June 12, 1927. 3,600 ft. el.

(2539)

140. Hugelia densifolia Benth.

Flowers blue, with veins of dark blue. Low decumbent plants growing in sandy soil along highway on southern side of Cajon Pass in lower part of valley. June 12, 1927. El. 2,500.

(2540)

141. Fremontia californica Torr.

Flowers bright yellow or orange. Shrubs on Cajon Pass highway near preceding. June 12, 1927. El. 2,500.

(2541)

142. Ceanothus divaricatus Nutt.

Flowers blue. Fruit sticky. On highway near preceding. June 12, 1927. El. 2,500

(2542)

143. Quercus dumosa. Nutt.

Dense, much-branched, rigid shrubs 5--10 ft. high on sandstone ridge south of house-site on Rancho Santa Ana.
June 16, 1927.

(2543)

144. Oxalis wrightii Gray.

In deep shade under Photinia in cañon to west of house-site. June 16, 1927. Botany Garden.

(2544)

145. Juncus balticus Willd.

Among rocks in bottom of gully near preceding. Dry situation. June 16, 1927. Canyon west of house. Botany Garden.

146. Baccharis viminea. DC.

Growing in bottom of gully which joins the canon west of house-site. Shrub about 8 ft. high. Leaves glutinous-sticky.
June 16, 1927. Botany Garden

(2545)
(Nutt.) Benth & Hook.

147. Rhus integrifolia. ~~B. & H.~~

Dense evergreen shrub up to about 12 ft. high. Branchlets tough, leaves leathery. Fruit orange-red, wet-viscid, and very acid to taste. Near preceding.
June 16, 1927.

148. Nicotiana glauca. Graham.

Shrub growing ablut 10 ft. high along road to house-site. Flowers yellow or yellowish-green. June 16, 1927. Botany Garden.

149. Solanum ~~umbelliferum.~~ xantii Gray.

Shrub 2--3 ft. high with several erect branches from the base. Corolla purple with 10 green glandular spots in inner part. Near gate, south-east corner of garden.
June 17, 1927. Botany Garden.

(2546)

150. Apiastrum angustifolium. Nutt.

In shade under grasses and shrubs on steep northern slope in canon to north of house-site. Flowers white.
June 17, 1927. Botany Garden.

151. Poa. (2547)

With preceding. Perennial?
June 17, 1927.

(2548) (Kellogg)

152. Rhamnus crocea var. ilicifolia. Greene.

Fruit 2-seeded, reddish when ripe with soft juicy pulp. Shrub in canon north of house-site. June 17, 1927. Botany Garden.

153. Bromus. (2549)

Inflorescence remarkably graceful because of the pendent spikelets. Apparently perennial.
With preceding. June 17, 1927. Botany Garden.

154. Scrophularia californica. Cham.

Corolla deep purple-red. In deep shade of shrubs with preceding. June 17, 1927.
Botany Garden, canyon north of house. 2550

155. Godetia ~~epiloboides~~ bottae Spach. Wats.

Annual herbs growing near the preceding in grassy opens between shrubs. Petals truncate, denticulate, wavy, pinkish-lavender, specked with red, more so on upper 2 petals than on lower 2. Growing with Salvia leucophylla, Rhus integrifolia, Rhamnus crocea var. ilicifolia, Photinia, Diplacus, Artemisia.
June 17, 1927. Canyon north of house.
Botany Garden.

156. Rafinesquia californica. Nutt.

Flowers white, pink or reddish underneath. Growing in shade with preceding. June 17, 1927.

2551

157. Pellaea andromedaefolia. Fee.

Pinnules rolling up on maturing and drying. In shade with preceding. June 17, 1927.

158. Adiantum emarginatum. Hook.

Near preceding. June 17, 1927.

159. Heliotropium curassavicum. L.

Corolla-lobes pale on the margin becoming purple in the throat. Succlent herbs growing in bottom of canon in dry sandy soil below preceding. June 17, 1927.

2552.

160. Distichlis spicata Greene.

Perennial. With preceding. June 17, 1927.

161. Spergularia salina var. sordida (Greene) Jepson.

Herbage succulent. Petals rose-pink, not exceeding the calyx. With preceding. June 17, 1927.

162. Polypogon monspeliensis Desf.

Annual. With preceding. June 17, 1927.

163. Gastridium ventricosum (Gouan) Schinz & Thell.

Annual. Above stream-bed in better drained and more loamy soil near preceding.
June 17, 1927.

164. Agropyron. 2553.

With preceding.
June 17, 1927.

165. Rumex ~~conglomeratus~~ crispus L. 2554

With preceding.
June 17, 1927.

166. Avena barbata Brot.

Along road in botany garden. Southern slope in loose loil washed from bluffs above.
June 17, 1927. Along road. Botany Garden.

167. Quercus ~~engelmannii~~ dumosa Nutt. 2555

Trees low, about 20 ft. or less high, forming a dense grove on northern slopes in upper west branch of Aliso Canon, growing there with Juglans californica and Quercus agrifolia, the ground beneath covered by such herbs and shrubs as Pentstemon cordifolius, Osmorrhiza brachypoda, Polygala cornuta var fishiae, and ferns including Aspidium, Adiantum, Gymnogramme.
June 18, 1927. Ea. c. 900 ft. 2556
R.S.A.

168. Rhus integrifolia (Nutt.) ~~B & H~~ Benth & Hook.

Forming an arborescent shrub beneath preceding.

Fruit wet and mealy on outside.
June 18, 1927.

169. Cryptantha muriculata. Greene.

Flowers white with very pale yellow throat.
In dry soil along road in garden above water-tank. June 20, 1927. Along road above Water tank, Botany Garden.

(2557)

170. Sphaeralcea fasciculata. Arthur.

Shrub up to 8 ft. high. Flowers pinkins-lavender, slightly fragrant. Stamens peculiar and brilliant purplish-orange color. Scattered individuals growing on dry rocky slopes in upper part of garden near road. June 20, 1927.
Botany Garden.

(2558)

171. Centaurea melitensis. L.

Bushy plants with bright yellow flowers growing along road near water-tank.
June 20, 1927. Botany Garden.

(2559)

172. Lepidium robinsonii. Thell.

In loose soil near preceding, slope to east.
The upper sides of mature silicles often become purplish. June 20, 1927. Along road near water tank. Botany Garden.

(2560)

173. Xanthium spinosum. L.

Along road near house-site.
June 20, 1927. Near house. Botany Garden.

174. Brassica nigra. Koch.

Along road between house-site and reservoir.
Flowers yellow. June 20, 1927. Botany Garden.
(2561.)

californicum Jepson.
175. Lepidium virginicum var.

In dry sunny place along railroad below orchard
no. 8. June 21, 1927.
Rancho Santa Ana. (2562)

176. Mirabilis laevis. Curran.

Spreading herb. Leaves succulent, stems very
brittle. Calyx light rose-purple, deeper in
throat, the tube pale greenish-yellow or whitish,
narrow-campanulate. With preceding.
June 21, 1927. R.S.A.

(2563)

177. Euphorbia maculata L.

Plants prostrate. Herbage often with reddish
tinge. With preceding. R. S.A.
June 21, 1927.

(2564)

178. Polygonum aviculare L.

Plants prostrate, forming mats a ft. or so in
diameter. Flowers pinkish, the edges of the
calyx-lobes white. With preceding.
June 21, 1927. R. S. A.

2565

179. Quercus agrifolia. Nee.

In small sandy flat in stream-bottom in mouth of
deep canon in west part of garden. Medium-sized
round-topped tree with shallowly fissured bark.
June 21, 1927. Botany Garden.

2566.

180. Ellisia ~~torreyi~~ chrysanthemifolia Benth.

Habit lax, stems spreading and ascending. Herbage viscid. Flowers white with yellow tube, the throat below each lobe with 2 or 3 purple lines. Corolla narrow-campanulate. Stamens not exserted. In deep shade under shrubs near preceding. June 21, 1927. Botany Garden.

2568

181. Sporobolus airoides. Torr.

Inflorescence much-branched, with purplish hue. In more open part of canon-bottom near preceding. June 21, 1927. Botany Garden.

182. Schinus molle. L.

A thrifty young tree probably introduced by birds. Growing in canon-bottom to east of house-site near preceding. June 21, 1927. Botany Garden.

183. Baccharis emoryi Gray.

In moist part of canon-bottom near preceding. Only 1 specimen seen. June 21, 1927. Botany Garden.

184. Populus fremontii ~~var~~. Wats.

With preceding. Botany Garden. June 21, 1927.

185. Salix lasiolepis. Benth.

With preceding. Botany Garden. June 21, 1927.

186. Salix laevigata Bebb. (?)

With preceding. Botany Garden.
June 21, 1927.

2569.

187. Juncus balticus var. eremicus. Jepson.

Perhaps same as 145 but growing in moist place and with stouter habit and larger inflorescence. Near preceding. June 21, 1927. Botany Garden.

188. Salix ~~lasiandra var. lancifolia. Bebb~~ nigra var vallicola Dudley.

Leaf-margins and stipules with prominent and sticky glands. June 21, 1927. Rancho Santa Ana.

189. Opuntia occidentalis var. (?)

Joint before drying 8 1/2 in. long, 5 in. wide. Flower purlpish-pink, the segments of calyx and corolla not joined. No spines on fruit the glochids becoming long. Plants about 2 ft. high. June 21, 1927. South slope to south of house-site. Botany Garden.

190. Opuntia occidentalis. Engelm. & Bigel.

Joint before drying 8 X 4 in. one side very spiney, the other with few spines. Flowers yellow, the outer segments tinted with pink on outside, varying to orange. Fruit fleshy, reddish-purple. Plant 2--4 ft. high. Fruit 2 in. long and nearly 1 1/4 in. across. With preceding. June 21, 1927. Botany Garden.

191. Brassica adpressa. Boiss.

Flowers yellow. Just below line of garden in

orchard no. 8. June 21, 1927. Rancho Santa Ana.

2571

192. Perezia microcephala. Gray.

Roots slender tuberform, with juice staining like iodine. Corolla pink, bilabiate. Pappus conspicuous, exceeding the involucre several weeks before flowers appear. Northern slopes to east of house-site with Salvia, Diplacus, Castilleja, etc. June 22, 1927. Botany Garden.

2572

193. Calochortus weedii. var. vestus Purdy.

Height varying from about 1--3 ft. Basal leaf 1, slightly exceeding to nearly equalling height of plant. Calyx tinted with purplish outside ord almost yellow, inside finely mottled with purple on yellowish background, the early flowers of inflorescence with dense tuft of hairs at base, later flowers with hairs nearly or quite lacking. Corolla segments varying from nearly pure greenish-yellow to nearly wholly purple, intermediate color forms with margin of petal with purple band, passing by flecks and splashes of color to yellowish base. The outside is colored by flecks and dashes, the inside evenly tinted except near base. The inside and erose margin conspicuously long-hairy. The hairs yellow with purple tips and arising from purple bases, the fringe hairs sometimes without purple spot at base. Hairs nearly or quite to margin of petal becoming more munerous down to gland, the base below gland without any hair except on margins. Dense tuft of hair around gland, these approximate over gland. Gland forming prominent convexity on outside of petal. In sandy and rocky clay soil on southern slope with sandstone outcrops in upper part of garden. June 22, 1927. Botany Garden.

194. Eschscholtzia californica. Cham.

Apparently plants of this season though with aspect of summer form of E, californica. Petals yellow becoming more intense in color at base. On bluffs along road in botany garden. June 22, 1927. Botany Garden.

2575

195. Opuntia ~~prolifera~~ parryi. Engelm.

Bushy plants 3--4 ft. high with 1 or several stems from base. Flowers greenish-yellow, tinged with red. Fruit in circles at end of ultimate joints. June 22, 1927. Rancho Santa Ana.

2576

196. Agrostis verticillata Vill.

Tufted perennial grass growing in boggy places in creek-bottom, west branch of Aliso Canon. June 24, 1927. El. 1650 ft. Rancho Santa Ana.

2577

197. Adiantum emarginatum. Hook.

In deep shade on steep northern slope under Quercus agrifolia, Q. engelmannii and shrubs such as Photinia, Rhus diversiloba and R. integrifolia, Symphoricarpos mollis. El. c. 900 ft. June 24, 1927. steep north slope. Rancho Santa Ana.

198. Pterostegia drymarioides. F. & M.

Near preceding. Common in canon but nearly all plants seen withered or dried. June 24, 1927. Rancho Santa Ana.

199. Osmorrhiza brachypoda. Torr.

Near preceding. June 24, 1927. Rancho Santa Ana.

(2578)
arguta Eat.

200. Aspidium rigidum var.

With preceding. R.S.A.
June 24, 1927.

(2580)

201. Potentilla glandulosa Lindl.

Near preceding. No flowers seen.
June 24, 1927. R.S.A.

(2582)

202. Polygala cornuta var. fishiae. Jepson.

Forming intensely green and dense thickets, 3--6 ft. high on steep bands near preceding in deep shade. Flower pinkish-purple, sometimes somewhat greenish. June 24, 1927. R.S.A.

2583.

203. Lonicera subspicata H. & A.

Loosely shrubby plants 5 or 6 ft. tall. The flowers creamy-yellow. Northern slope in open in grove of Q. agrifolia and Q. ~~engelmannii~~ ducensis with Pentstemon cordifolius, Rhus trilobata, and R. diversiloba. Near preceding.
June 24, 1927.R.S.A.

(2585)

204. Galium nuttallii Gray.

Weak, straggling plant climbing into low bushes. Flowers small, greenish. Fruit glaucous one seen with purplish tinge. Dry open place on edge of grassy patch near preceding. Root-stock very slender.
June 24, 1927. R.S.A.

(2586)

205. Ribes speciosum Purah.

Low shrub 2--3 ft. high near preceding on bank of arroyo. Ripe fruit rosy-pink. June 24, 1927. R.S.A.

(2587)

206. Lupinus longifolius Abrams.

Shrubby plant 2 ft. high with very woody base. Basal half of banner and wings whitish becoming lavender-blue at tips, early becoming brownish and persistent for some time in that color. In soft chaparral thicket near head of canon above preceding, steep north slope. June 24, 1927. El. c. 1200 ft. R.S.A.

(2588)

207. ~~Anaphalis~~ Gnaphalium decurrens var. californicum Gray.

Near preceding. R.S.A. June 24, 1927.

208. Achillaea millifolium var. californicum Jepson.

With preceding. R.S.A. June 24, 1927.

209. Phacelia distans. Benth. (2589)

Annual plants growing in clump which form rounded masses about 3 ft. tall. Herbage with 2 kinds of hairs, one somewhat stinging, hispid, the other glandular. Corolla shallow campanulate, the lobes spreading, lavender-blue, becoming paler in throat, a small purple spot in tube below each sinus. In sandy soil in waste ground at Olinda, Orange Co. June 24, 1927. El. c. 500 ft.

(2591)

210. Monardella pringlei Gray.

Flowers purplish. Collected by B. D. Stark in sandy soil near Cresmore, a locality in west Riverside, Riverside Co. c.1,000ft. June 25, 1927.

(2592)

211. Eriophyllum confertiflorum var. laxiflorum Gray.

Inflorescence with unusually long rays. Flowers yellow, rays showy. On northern slope in Claymine Canon, near head of more level part of of canon. Claymine Canon is the large canon just to the west of Sierra Peak in the Santa Ana Mts. June 26, 1927. el. c. 800ft.

(2593)

212. Cirsium californicum Gray.

Plants 2--4 ft. high. Flowers waxy-white, the anthers pale lavender. Near the preceding in open patce of grassland, moderate slope to west. Only specimens seen. June 26, 1927.

2594

213. ~~Oenothera~~ Eulobus californicus Nutt.

Stem-leaves about 1 in. long, denticulate. Flowers yellow, becoming orange on fading. On steep eastern slope in loose rocky soil along trail to top of Sierra Peak, on east side of Claymine Canon, el. about 1000 ft. The hills at this station are covered by mixed shrub formation consisting of Eriogonum fasciculatum, Pentstemon antirrhinoides, Salvia mellifera, Rhus integrifolia, R. laurina, Ceanothus macrocarpus, Artemisia californica, Lotus scoparius, Leptodactylon, Diplacus, Rhamnus crocea var. ilicifolia, Photinia, Adenostoma, etc. June 26, 1927.

(2595)

214. Antirrhinum nuttallianum Benth.

Herbage almost viscid-pubescent. Stems becoming twining. Flower with upper lip erect, lavender as are 3 lobes of lower lip, the throat closed by doming of lower lip, this part paler, lavender-whitish, veined with lavender and with yellow hairs. Near preceding. June 26, 1927.

215. Cryptanthe muriculata. Greene.

Loose shady soil near preceding.
June 26, 1927.

(2596)

216. Trichostema lanatum Benth.

Two lobes of upper lip and 2 lateral lobes of lower lip bluish-purple, shallowly concave or nearly plane, the middle lobe of lower lip deeply concave and wavy-margined, deeper purple. Calyx with hairs reddish-purple. Shrub 5--6 ft. Near preceding. June 26, 1927.

2598

217. Silene laciniata Cav.

Herbage glandular. Flowers bright red. Capsule upening by 6 slits, the six teeth recurved. In shade of chaparral shrubs (see no. 213) near preceding. June 26, 1927.

(2599)

218. Cordylanthus rigidus Jepson.

In sandy soil along trail in chaparral above preceding, el. c. 1200 ft. Flowers yellowish-white, the margin of lower lip purple-lined, the throat of lower lip with purple spot.
June 26, 1927.

(2600)

219. Galium nuttallii Gray.

Fruit whitish, juicy, the fleshy part drying over the black seed and so the fruit appears black. Climbing several ft. into shrubs of chaparral consisting mainly of Ceanothus macrocarpus and Adenostoma at this place. Near preceding. June 26, 1927.

(2601)

220. Velaea arguta C.&R.

Under chaparral shrubs with preceding. Common in Chaparral above this point. June 26, 1927.

(2602)

221. Lomatium parvifolium Jepson.

With preceding. Only 3 or 4 specimens seen. June 26, 1927.

(2603)

222. Arctostaphylos glandulosa Eastw.

Mostly low shrub, rather flat-topped, 3 ft. high. Fruit flattened, not sticky, seeds distinct. June 26, 1927. With following.

(2604)

223. Arctostaphylos glauca Lindl.

Shrub often over 3 ft. high. Fruit round, sticky, the seeds grown together. This form more common than preceding. These 2 species together with Ceanothus macrocarpus and C. tomentosus form the main chaparral shrubs above this point at an el. of about 1500. Other chaparral shrubs are Eriodictyon crassifolium, Dendromecon, Adenostoma, Pickeringia. June 26, 1927.

(2605)

224. Rhamnus californica. Eschs.

Low shrub 4 ft. high near preceding. Not common. June 26, 1927.

(2606)

225. Sphacele calycina var. glabella Gray. G-147

Herbage somewhat sticky-glandular but not densely pubescent. Inflorescence often purplish. Corolla white, lobes generally tinged with lavender. Seeds black. Shrubby plant about 2--3 ft. high growing in chaparral el. c. 2000 ft. along the trail to top of Sierra Peak, Santa Ana Mts. June 26, 1927.

(2607)

226. Cupressus forbesii Jepson.

Shrubby, densely branched trees up to 30 ft. high. Bark exfoliating as in Eucalyptus, greyish or reddish, giving tree distinctive aspect. Forming considerable patches in chaparral near head of Claymine Canon on areas gently sloping to the north, el. c. 2300 ft.

(2608)

227. Ceanothus tomentosus. var. olivaceus Jepson. G-147

G/149

Shrub up to 12--15 ft. high (or lower), sometimes distinctly arborescent. Bark dark grey, rough. With preceding. June 26, 1927.

(2609)

228. Ceanothus macrocarpus. Nutt.

G 145

Shrub generally under 6--8 ft. Some of leaves denticulate. With preceding.
June 26, 1927.

229. Leptodactylon californicum H. & A. (2610)

Straggling or few-branched erect shrubs, sometimes bushy, 2--3 ft. high. Flowers with pink or lavender-pink lobes, the throat white or at least much paler. Along trail near nos. 222--224, el. c. 1500 ft.
June 26, 1927.

230. Melica imperfecta (?)

Where nos. 213--217 were collected.
June 26, 1927.

231. Cercocarpus betuloides Nutt. (2612)

Tall shrub or arborescent, 12--15 ft. high. Floor of Claymine Canon. Becoming dwarfed in chaparral higher up. June 26, 1927. El. c. 800 ft.

232. Madia dissitiflora T. & G. (2613)

Glandular, heavy-scented, annual herbs growing in grassy, semi-shaded place near nos. 211 and 212. June 26, 1927.

233. Eriodictyon crassifolium Benth. (2614)

Tall shrubs 6--8 ft. high. Fruiting specimens from chaparral where nos. 226--228 were collected, the flowering specimen from bottom of Claymine Canon, el. c. 700 ft. Corolla-lobes lavender or pale purple,
June 26, 1927.

2615
Hall.

234. Centromadia pungens var. parryi.

In alkaline sandy soil on Bryant Ranch about 7 miles east of Long Beach. Flowers yellow. Plants round-bushy, 2 ft. high.
June 30, 1927. Alt. 30-50 ft.

2616

235. Atriplex coulteri (?)

Somewhat succulent annual with spreading stems, forming bushes about 2 ft. high. With preceding. June 30, 1927.

2617

236. Spergularia salina J. & C. Presl.

Herbage slightly succulent. Petals light purplish. With preceding.
June 30, 1927.

2618

237. Scirpus campestris Britt.

In wet mucky soil on canal bank near preceding.
June 30, 1927.

2619

238. Eleocharis parishii Britt.

With preceding.
June 30, 1927.

2620

239. Scirpus americanus Pers.

With preceding.
June 30, 1927.

2621

240. Polypogon monspeliensis Desf.

With preceding on canal bank but somewhat higher in moist but better drained soil.
June 30, 1927.

241. Paspalum. 2622

Grass introduced on hunting preserve. With following. Det. by A.M. Johnson.
June 30, 1927.

2623
Engelm.

242. Juncus acutus var sphaerocarpus

Forming rather dense bunchy bushes, 2--4 ft. across and 4 or 5 ft. high. Leaves very sharp and slender-pointed. On aldaline and peaty flats near a marsh to the south of the Bryant Ranch and 1 mile east of Long Beach city limits. June 30, 1927.

2624

243. Scirpus acutus Muhl.

In swamp near preceding. Stems 6--8 ft. tall.
June 30, 1927.

2625

244. Lippia lanceolata Michx.

Stems creeping and rooting, the ends and branches ascending. Flowers whitish or pale lavender.
In drier place near preceding.
June 30, 1927.

2626.

245. Jaumea carnosa. Gray.

Herbage succulent. Flowers yellow. Low, loosely tufted perennial with preceding. June 30, 1927.

2627

246. Stachys ajugoides Benth.

Herbage with rather pungent minty smell. Corolla lavender with tint of rose, the lower lip spotted with purple. With preceding.
June 30, 1927.

2628

247. Petunia parviflora. Juss.

Plant mat-like, the stems prostrate and rooting. Corolla nearly regular, the side of the corolla with convexity in mouth of throat. Color variable--in some plants white, in others purple corollas. Both collected.
With preceding. June 30, 1927.

2629.

248. Frankenia grandifolia C. & S.

Low bushy plants about 6 in. high. Flowers rose color. With preceding.
June 30, 1927.

2630

249. Cressa cretica. L.

Spreading decumbent plants in dry, extra alkaline patch near preceding--no other plant growing with it. Other specimens seen growing with preceding but not yet blooming. Apparently most common where pools of water have stood. Corolla whitish. June 30, 1927.

2631

250. Bidens pilosa. L.

Flowers orange. Growing in sandy soil on Bryant Ranch near Long Beach municipal golf links. June 30, 1927.

2632

251. Mesembryanthemum crystallinum. L.

Herbage with dewy appearance because of large water-filled epidermal cells. Flowers with many linear petals, whitish or pale pink. June 30, 1927. Near preceding.

2633

252. Daucus carota L.

Herbaceous plants 6 ft. tall. Flowers white. Near preceding. June 30, 1927.

2634

253. Arctium lappa L.

Tall herbs about 5 ft. high with very large lower cauline leaves, 1--2 ft. long. Flowers with reddish corolla, purple and white stamens and white pistil. Near preceding. June 30, 1927.

2635

254. Juncus oxymeris Engelm.

Growing in moist ground in canon bottom. Perianth-segments greenish, the tips brownish. In the canon which runs east from the head of Claymine Canon towards Sierra Peak. July 3, 1927. alt. c. 10000 ft.

2637

255. Cotyledon lanceolata Brew. & Wats.

Leaves lanceolate or ovate-lanceolate, green tinged with purplish, not glaucous. Flowers yellowish tinged with purple; the branches of the inflorescence reddish and glaucous. On dry, shaded , northern slopes near the preceding. July 3, 1927.

2638

256. Helianthus gracilentus Gray.

Bushy plants several feet high. Rays bright yellow, disk pale brownish-yellow, at least not dark brown. Near the preceding, but on a steep southern slope.
July 3, 1927.

2639

257. Cheilanthes californica Mett.

Fronds of this season all curled, as if because of drying. Becoming plane again on soaking in water. Near preceding on southern slope under large specimen of Pseudotsuga macrocarpa. July 3, 1927.

2640

258. Polygala cornuta var. fishiae. Jepson.

In young flowers the keel and banner are greenish. In old flowers the wings are lavender-pink, the keel and banner purple. Near the preceding on north slope in the very deep canon, hence somewhat shaded.
July 3, 1927.

2641

259. Umbellularia californica.

Low stunted trees in upper part of canon, in branch which extends to the south-east.
July 3, 1927. El. 1500 ft.

2642

260. Mentzelia micrantha T. & G.

Flowers yellow. Herbage with clinging hairs. On bank in loose soil fallen from the bluffs above. Near 258. July 3, 1927.

2644

261. Stachys ajugoides Benth.

Corolla pinkish-lavender, the lower lip with purple markings. Growing in moist soil along stream near the preceding.
July 3, 1927.

2645

262. Lilium humboldtii. Roezl & Leichtl.

Plants 3--6 ft. high, the largest carrying a number of flowers, the smaller with one or several flowers. Perianth segments orange, the tip reddish-brown, the base brown-spotted, strongly recurved at about the middle. Growing on a shaded, steeply sloping bank in gravelly soil near the preceding.
July 3, 1927.

2646

263. Datisca glomerata Brew. & Wats.

Growing in very wet soil on bank of brook in canon with preceding. Plants were seen that were anchored by half the roots to the bank while the rest branched freely in the water.
July 3, 1927.

2648

264. Datura meteloides DC.

Flowers large, funnelform, white or frequently the margin tinted with lavender or purple. Along the road near the garden.
July 5, 1927.

2650

265. Atriplex expansa Wats.

Alomg the road near the walnut grove.
July 5, 1927. R.S.A.

2651

266. Nicotiana bigelovii Wats.

Glandular herbs with white flowers.
July 5, 1927. Near the preceding. R.S.A.

2652

267. Epilobium californicum Hausskn.

Perennial herb growing in a moist place along the road about 1/2 mile east of Horseshoe Bend. Flowers at first whitish, becoming pink or rose when older. July 5, 1927. R.S.A.

2653

268. Polygonum hydropiperoides Michx.

Flowers white at first, later pink. With preceding in wet ground.
July 5, 1927.R.S.A.

2654

269. Rumex berlandieri Meisn.(?)

With preceding and also nearby along the canal. Fruiting sepals with large white callous grains.
July 5, 1927. R.S.A.

2655

270. Scirpus validus Vahl.

Becoming 6--8 ft. tall in wet ground where water drips over a spillway along the canal. With preceding. July 5, 1927. R.S.A.

2656

271. Stillingia linearifolia Wats.

Low bushy plant growing along the railroad embankment near the preceding but in a very hot and dry place. July 5, 1927. R.S.A.

2657

272. Mimulus guttatus DC.

Flowers yellow, marked with reddish-brown spots in the throat. Growing in very wet situation on the edge of the water in the canal about 3/4 mile east of Horseshoe Bend. July 5, 1927. R.S.A.

2658

273. Hydrocotyle verticillata Thunb.

With preceding. The stems bearing flowers were on the side of the canal bank, the longer shoots without flowers were floating in the water. July 5, 1927. R.S.A.

perplexans Cov. 2647

274. Ceanothus greggii Gray. G-151

G-151

Along the road half way between Campo and Pine Valley, Cuyamaca Mts., San Diego Co. Collected by B. D. Stark, July 4, 1927.

275. Pinus torreyana. Parry. - G-148

G-148

Collected one mile north of Torrey Pine Grade on the Los Angeles-San Diego highway by B. D. Stark, July 3, 1927.

2659

276. Eleocharis acicularis. R. & S.

Growing in wet, sandy soil near a marsh on the old river about 3/4 mile southwest of the ranch houses, Rancho Santa Ana.
July 6, 1927.

277. Scirpus cernuus. Vahl.

With preceding. Only plant seen. R.Santa Ana.
July 6, 1927.

278. Scirpus ~~pauciflorus~~ cernuus Vahl.

With preceding. Only one plant seen.
July 6, 1927.

2660

279. Eleocharis montana. R.+S.

With preceding. R.S.A.
July 6, 1927.

280. Rubus vitifolius. C.+S.

Vines forming extensive thickets in the river bottom near the preceding. The young stems with conspicuous white bloom (glaucous.)
July 6, 1927. R.S.A.

2661

281. Psoralea orbicularis. Lindl.

Near the preceding. Flowers mostly past. Tips of corolla parts purple, fading to white at the bases.
July 6, 1927. R.S.A.

2664

282. Vitis ~~californica~~ girdiana Munson.

Near preceding, forming close thickets and climbing high into trees.
July 6, 1927. R.S.A. 3/4 mi. s.w. of ranch houses.

2662

283. Mimulus cardinalis. Dougl.

Herbage very sticky-glandular. Flowers scarlet, color very deep and velvety. Near preceding in moist sandy soil.
July 6, 1927.

2663

284. Azolla filiculoides. Lam.

Floating in shallow water of swamp or on very wet mud near preceding. Plants with numerous megasporangia, no microsporangia seen.
July 6, 1927.

285. Tribulus terrestris. L.

Near ranch-houses, Rancho Santa Ana.
July 7, 1927.

2665
G-160

286. Eurotia lanata. Moq.
G160

Bushes 2--2 1/2 ft. high. Flowers monoecious but tendency toward dioecious condition observed. Mojave Desert about 1 mile west of Deadman's Point. July 9, 1927.

2666

287. Tetradymia stenolepis Greene.

Bushy shrubs 2--3 ft. high. Flowers light yellow. With preceding. El. c. 3000 ft.
July 9, 1927.

2667 Jepson.

288. Larrea tridentata var. glutinosa.
G157
G-157

Shrubs not so tall as those found near Hesperia, these about 2--3 ft. high. In granite sand at Deadman's Point, Mojave Desert, about 12 miles east of Victorville. July 9, 1927. El. c. 3000 ft.

2668

davidsonii Jepson.

289. Eriogonum molestum var. ?

Dichotomously branched plants often flat-topped and broad as if trimmed. With preceding. July 9, 1927.

2669

290. ~~Langloisia punctata Hel.~~ Hugelia eremica Jepson

Flowers blue ~~or some pinkish and marked with reddish-purple~~. Along the road between Deadman's Point and Box S Ranch which is east of Deadman's Point. July 9, 1927.

Abronia 2670

291. ~~Mirabilis~~ villosa Wats.

Spreading and prostrate herbs with rose colored flowers. With preceding. July 9, 1927.

2671

292. Monardella exilis Gray. candicans var. ?

Flowers white. With preceding.
July 9, 1927.

2672

293. Astragalus lentiginosus Dougl.

Perhaps the same as no. 112, these flowers purplish-red when fresh and fading to lavender-blue on drying. Near preceding.
July 9, 1927.

2673

294. Lessingia lemmonii. Gray.

Flowers yellow. Herbage with peculiar greasy smell. With nos. 290 to 292.
July 9, 1927.

2674

295. Atriplex confertifolia Wats.

Rather low dense bushes about 2--3 ft. high growing on a saline flat where water had probably stood in the winter. Some shrubs with grey-green herbage, others with distinct purple tinge. July 9, 1927. Near preceding about half way between Deadman's Point and Box S Ranch.

2675

296. Suaeda suffrutescens Wats.

Shrub about 2 ft. high with somewhat succulent leaves. With preceding.
July 9, 1927.

2676

297. Suaeda. moquini Greene.

Shrub about 2 ft. high. Some plants greenish-yellow in color, others reddish.
With preceding. July 9, 1927.

2678

298. Chorizanthe brevicornu Torr.

Herbage yellowish-green or yellow, sometimes tinged with red. Very fragile.
In sandy soil somewhat nearer Box S Ranch than preceding. July 9, 1927.

2679

pleniradiata Cov.

299. Baileya multiradiata var.

Flowers yellow, the rays large and very showy.
With preceding. July 9, 1927.

2680

300. Cleomella obtusifolia. Torr. & Frem.

Low spreading or decumbent herbs. Flowers orange-yellow. Herbage with a strong odor. Near Box S Ranch. July 9, 1927. Alt. c. 3000 ft.

2681

301. Eleocharis montana R. & S.

Box S Springs

In moist or wet ground along small stream that flows down from [redacted]d Springs, on the road between Box S Ranch and Big Bear Lake. July 9, 1927. Alt. 3550 ft.

2682

302. Sporobolus asperifolius

With preceding.
July 9, 1927.

2683

303. Castilleja affinis var. linearifolia Zeile.

Plants 2--3 ft. high with glaucous herbage. Bracts scarlet, the tip of the calyx the same color, the corolla mostly greenish-yellow. With preceding. July 9, 1927.

2684

304. Cirsium mohavense Jepson.

Plants 3--5 ft. high, the herbage gray-green. Flowers lavender. With preceding, or in slightly drier situation. July 9, 1927.

[redacted]

305. Solidago confinis Gray.

Flowers deep yellow. Near preceding. July 9, 1927.

2685

306. Asclepias mexicana Cav.

Flowers yellowish or creamy-white with pale purplish tinge. With preceding.
July 9, 1927.

2686

307. Lythrum californicum T.+G.

Perennial herbs 3 ft. high or more. Flowers rose color. With preceding. July 9, 1927.

Endl.

308. Thelypodium integrifolium.

Tall herb, over 4 ft., with somewhat glaucous herbage. Flowers greenish-white.
July 9, 1927.

309. Juncus oxymeris Engelm.

In wet ground with nos. 301 and 302.
July 9, 1927.

2687

310. Chilopsis linearis DC.

Shrubs about 6 ft. or more high. Corolla pale lavender, the throat of lower lip with irregular purplish markings and lines, with 2 yellow ridges extending back from sinuses. In rocky stream-bed near beginning of Cushenberry Grade ~~between Cottonwood Springs and Cushenberry Spring~~. July 9, 1927. Alt. 3800 ft.

above Box S Spring

glandulosa Eckl.

311. Prosopis juliflora var. 2688

Flowers yellow. Shrubs growing is stream-bed now dry near preceding. July 9, 1927.

2689

312. Eriogonum inflatum. Tor. & Frem.

Stems somewhat glaucous. Flowers greenish, densely and conspicuously pubescent.
In dry rocky soil on Cushenberry Grade ~~about half way between Cottonwood Spring and~~ above Cushenberry Spring. Perennial with several stems arising from a thick root. July 9, 1927.
Alt. 3900 ft.

2690

313. Petalonyx nitidus Wats.

Rounded or flat-topped shrubs, now almost white with the numerous flowers, 2--3 ft. high. Common at this place, growing on steep rocky slopes or on rocky talus slopes near the road. Flowers white. July 9, 1927. With preceding.

2691

314. Erigeron parishii Gray.

Forming low bushy plants on sandy soil among the shrubs and rocks of the talus slope with the preceding. Rays pale purplish.
July 9, 1927.

2692

315. Pinus cembroides var. monophylla. Voss.

In situation similar to preceding but nearer Cushenberry Springs. This and Juniperus californica the only trees in this part of the cañon ~~below~~ above Cushenberry Springs.
July 9, 1927.

2693

316. Phoradendron bolleanum Eichler.

Parasitic on Juniperus californica which grows with the preceding. Berry somewhat translucent, those seen with distinct salmon-pink color.
July 9, 1927.

2694

317. Purshia glandulosa Curran.

Shrub about 4 ft. high with very glandular-sticky herbage. Near preceding.
July 9, 1927.

2695

318. Salvia carnosa Dougl.

Low bushy plant, stems many from the base. Bracts grey-green with purple tinge or almost wholly purple. Flowers deep purple-blue. Growing on rocky bar in the stream-bed ~~at Cushenberry Spring.~~ July 9, 1927. ℓℓ 4000 ft. Below Whiskey Springs.

2696

319. Clematis ligusticifolia Nutt.

Climbing vine. Flowers creamy-white. With preceding. July 9, 1927.

320. Amorpha fruticosa L. 2697

Near preceding but in drier and better drained situation. July 9, 1927.

2698

321. Prunus fasciculata Gray. G-163

G 163

Near preceding.
July 9, 1927.

2699

322. Fremontia californica Torr. G-164

G 164

Fruit with fine penetrating hairs, stinging when under the skin. Near preceding.
July 9, 1927.

2700

323. Gilia latiflora Gray.

Flowers shining, waxy white. Growing on bank along the road in loose soil, Whiskey Springs, el. 5420 ft. July 9, 1927.

2701

324. Quercus chrysolepis. Liemb.

Tree at Whiskey Spring. The young basal sprouts have spinose-dentate leaves.
July 9, 1927,

2702

325. Eriogonum saxatile Wats.

Flowers varying from yellowish to red.
Whiskey Spring among rocks in the open.
July 9, 1927.

2703

326. Ligusticum grayi C.+R.

Growing in hot dry soil along the road at Whiskey Spring near thepreceding.
July 9, 1927.

327. Nama parryi Gray. 2704

Flowering stems arising from a dense clump of basal leaves, the herbage very glandular. Flowers showy, corolla lavender-pink. Near preceding. July 9, 1927.

2705

328. Gilia. tenuiflora Benth.

Herbage glandular. Corolla-limb deep pink, throat yellow and the tube purplish-lined. In hot dry soil along the road just above Whiskey Spring. July 9, 1927.

2707
Jepson.

329. Ceanothus greggii var. perplexans.
G 165 G-165

Along the road just above Whiskey Springs in loose gravelly soil. July 9, 1927.

2708

330. Eriodictyon trichocalyx Hel.

Low bushes about 2 ft. high along the road at Cactus Flats. Flowers white. July 9, 1927. Ee. 600070.

2709

331. Atriplex canescens James.

Shrubs about 3 ft. high. With the preceding. July 9, 1927.

2710

332. Sphaeralcea davidsonii Jepson.

Spreading bushes 2--3 ft. high. Flowers soft pinkish-lavender. With preceding. July 9, 1927.

polifolium J.+G.

333. Eriogonum fasciculatum var.

2711

Low bushes 1--2 ft. high. Sepals white with green mid-vein. Anthers deep pinkish. With preceding. July 9, 1927.

2712

334. Hugelia densifolia Benth.

Flowers blue. With preceding. July 9, 1927.

2713

335. ~~Aster~~ Erigeron breweri Gray.

Rays purple. With preceding.
July 9, 1927.

2714

336. Amsonia brevifolia Gray.

Along the road near the foot of Johnson Grade just after leaving Cactus Flat.
July 9, 1927.

2715

337. Eriogonum saxatile Wats.

Along the road at Johnson Grade between Cactus Flat and Lake Balwin. Same as no. 325.
July 9, 1927.

2716

338. Phacelia ramosissima. Hough.

Flower pale yellowish with tint of blue. Spreading plants growing along the road in loose soil near preceding. July 9, 1927.

339. Aster canescens Pursh.

Rays deep purple. With preceding.
July 9, 1927.

2718

340. Pentstemon eatoni Gray.

Flowers bright scarlet. With preceding.
July 9, 1927.

2717

340A. Galium multiflorum Kell.

With preceding. July 9, 1927.

2719

341. Streptanthus major Jepson.

Coarse and robust glaucous herbs. Flowers greenish or yellowish generally tinged with purple. With preceding.
July 9, 1927.

2720

hookeri Jepson.

342. Leptodactylon pungens var.

Corolla white marked on the outside with reddish or rose. With preceding.
July 9, 1927.

stellatum Jones.

343. Eriogonum umbellatum var.

2721

Flowers bright lemon yellow. Growing among pines on a northern slope near the south end of Baldwin Lake. July 9, 1927. El. 6600 ft.

344. Tetradymia canescens DC.

Flowers yellow. With preceding.
July 9, 1927.

2722

345. Dicentra chrysantha Walp.

Flowers bright lemon yellow. Near the preceding.
July 9, 1927.

2723

californica Jepson.

346. Oenothera pallida var.

Petals white, obcordate. On east side of Big Bear Lake in vicinity of Pine Knot at Colorado Camp. July 9, 1927. El. 6700 ft.

bernardina Jepson.

347. Potentilla bolanderi var. 2724

Flowers white. Growing in moist shaded situations near the preceding. July 10, 1927.

2725

348. Scutellaria angustifolia Pursh.

Corolla deep purple. In sandy soil in partial shade near the preceding.
July 10, 1927.

2726

platyloba Jepson.

349. Silene verecunda var.

Corolla sordid pink in color, rarely fresh and very attractive. With preceding.
July 10, 1927.

2727

350. Erysimum asperum . DC.

Petals bright orange-yellow. With preceding.
July 10, 1927.

2728

351. Phacelia mojavensis. Gray.

Corolla blue, the throat paler to nearly white. Near preceding. July 10, 1927.

2729

352. Phacelia heterophylla. Pursh.

Flowers whitish or very pale lavender.
Very common in these parts. With the preceding.
July 10, 1927.

2731

353. Ranunculus californicus var. ludovicianus Davis.

Flowers yellow. Growing in moist, shaded places near the preceding.
July 10, 1927.

2732

354. Polygonum amphibium L.

Flowers deep pink. Growing on the wet, marshy flats on the shore of Big Bear Lake, recently under water. July 10, 1927.

2733

355. Calochortus nuttallii Torr.

Petals varying from very deep purple to almost pure white. The purple flowers came from near nos. 346 to 353, the white flowered form from the upper of Big Bear Lake on the west side, a somewhat drier location.
July 10, 1927.

356. Orthocarpus cinereus Jepson.

The bracts conspicuous, greenish-yellow or the tip almost lemon-yellow. Flowers greenish-yellow. Near 353.
July 10, 1927.

2734

357. Cirsium acaulescens Jepson.

Plants acaulescent. Flowers lavender.
Near preceding. July 10, 1927.

2735

358. Eriogonum spergulinum Gray.

In sandy loam near the preceding in open sunny place. Flowers pinkish.
July 10, 1927.

2736

359. Erigeron concinnus T.+G.

Rays lavender-blue. With preceding and also with no. 353.
July 10, 1927.

2737

360. Viola douglasii Steud.

Corolla yellow marked with brown. With preceding.
July 10, 1927.

2737 A.

360A. Pentstemon labrosus Hook.

Corolla varying from scarlet to almost orange tinged with red. Near preceding.
July 10, 1927.

2739

361. Astragalus douglasii Gray.

Decumbent plants; flowers whitish; pods strongly inflated, somewhat flattened above, rounded below. Along the road at the upper end of Big Bear Lake. July 10, 1927.

2740

362. Hymenopappus filifolius var. ~~Japan~~ lugens Gray.

Flowers yellowish. With preceding.
July 10, 1927.

2741

363. Solanum xantii Gray.

Plants decumbent or spreading. Flowers purple. Along the road on the west side of Big Bear Lake between Fawnskin and the upper end.
July 10, 1927.

2742

364. Pentstemon palmeri Gray.

Bushy plants 2--3 ft. high. Corolla whitish outside, purplish-blue on limb and throat, the lower part marked with reddish-purple.
Along the road near the preceding.
July 10, 1927.

2743

365. Lupinus andersonii Wats. G-175
G175
Perennial plants 2--3 ft. high. Flowers white.
Along the road near the preceding on the west side of the lake--(Big Bear Lake).
July 10, 1927.

2744

366. Psoralea rigida Parish.

Flowers pale yellowish. Near the preceding.
July 10, 1927.

2745

367. Lupinus breweri. Gray. G-174
G174
Prostrate plants growing in sandy soil in partially shaded, but dry situations along the road near the preceding. Flowers blue, the center of the banner whitish.
Jult 10, 1927.

2746

368. Astragalus lentiginosus Dougl.

Plants prostrate, forming mats. Flowers whitish. Pods sometimes specked with reddish-purple. With preceding. July 10, 1927.

Det by M E. Jones.

2747

369. ~~Aster~~ Erigeron breweri Gray.

Rays purple. With preceding.
July 10, 1927.

2748

370. Delphinium parryi Gray.

Flowers pale blue. With preceding.
July 10, 1927.

2748A.

370A. Juniperus occidentalis Hook.

Tall trees for this genus and species and with thick trunks with shreddy bark.
Near the preceding along the road on the west side of Big Bear Lake.
July 10, 1927.

2749

371. Hypericum formosum var. scouleri

Flowers yellowish generally tinted and shaded with red or scarlet. In marshy place along the road near the preceding.
July 10, 1927.

2750

372. Lupinus confertus Kell.

Flowers blue. Growing with the preceding in wet ground. July 10, 1927.

373. Polygonum bistortoides Pursh.

Flowers whitish. With preceding.
July 10, 1927.

2751

374. Linanthus ciliatus Greene (?)

Much-branched plants. Flowers white, the tube of the corolla yellow. In dry sandy soil along the road near the preceding.
July 10, 1927.

2752

375. Lupinus latifolius Agardh.

Flowers blue. With nos. 371 to 373 in wet ground.
July 10, 1927.

2753

376. Rumex salicifolius var. montigenitus Jepson.

With the preceding.
July 10, 1927.

2754

377. Monardella linoides var. stricta Parish.

Flowers light purple. In open dry pine forest on west side of Big Bear Lake along the road. July 10, 1927.

2755

378. Euphorbia palmeri Engelm.

With preceding. Forming rather broad low bushes with the preceding.
July 10, 1927.

2756

379. Ceanothus confusus Kell.

Low flat-topped shrubs 1--3 ft. high. Flowers white. With preceding.
July 10, 1927.

2757

380. Iris missouriensis Nutt.

In a marshy meadow on the east side of Big Bear Lake along the road between the dam and the Mill Creek control road.
July 10, 1927.

381. Eriogonum kennedyi Porter.

Plants forming prostrate mats on the ground in dry open places near the preceding. Flowers pink or white marked with pink.
July 10, 1927.

2758

382. Lilium parryi Wats.

Plants 1--2 ft. high, the erect stem bearing 1 or 2 flowers. Perianth segments clear yellow, the lower part with small reddish-brown dots, recurved near the middle.
Growing on a grassy bank in wet soil on the Mill Creek road between the Riverside Municipal Camp and Big Bear Lake.
July 10, 1927.

2759

383. Symphoricarpos rotundifolius Gray

In sandy soil on bank of a small stream near the Riverside Municipal Camp on the Mill Creek Road. Flowers whitish varying to pale purple with a pinkish tinge. Alt. c. 7300 ft.
July 10, 1927.

2760

384. Thallictrum sparsifolium Trucz.

In moist, partially shaded places on the stream bank and in the meadow near the preceding.
July 10, 1927.

2761

385. Scirpus microcarpus Presl.

In very wet place in meadow near the preceding. July 10, 1927.

2762

386. Montia chamissoi Ser. & Jac.

Growing in slowly moving water in meadow with preceding. Herbage succulent; flowers white. July 10, 1927.

2763 1/7 Engelm.

386A. Arceuthobium campylopodum ?

Growing on Pinus ponderosa var. jeffreyi at the Riverside Municipal Camp. July 10, 1927.

386B. Agrostis - near 384. July 10, 1927.

387. Eriogonum molestum Wats.

2764

Along the road in loose and sandy soil fallen from cuts. City Creek Road just below Big Bear Lake. July 10, 1927. El. 6000 ft.

2766.

388. Streptanthus campestris Wats.

In dry open place along the City Creek road in loose soil which had fallen from the sides of a road cut. July 10, 1927.

2767

389. Streptanthus campestris var. bernardinus Jepson.

In situation similar to the preceding and near it. July 10, 1927.

2768

390. Eriophyllum lanatum var. obovatum Hall.

Flowers yellow. With preceding. July 10, 1927.

2769

391. Ceanothus divaricatus Nutt.
G176 G-176

Shrubs about 4 ft. high growing along the City Creek Road short distance below Inspiration Point. The capsules covered with blister-like swellings filled with a slimmy solution which which when mixed with water formed a lather.
July 10, 1927. ca. c. 5000 ft.

2770

392. Calochortus plummerae Greene.

Similar to no. 80 in respect to color.
Near the preceding in chaparral. July 10, 1927.

2771

393. Salix lasiolepis. Benth.

Tall shrubs or low trees. Bark smooth or becoming shallowly channelled on older trees. Young leaves pubescent beneath or merely glaucous. In the Santa Ana River bottom at the Rancho Santa Ana. July 14, 1927.

2772

394. Salix ~~lasiandra var. lancifolia. Bebb~~ nigra var vallicola Dudley

Trees with rough bark. Petioles not conspicously glandular but the margin of the blade generally so. With the preceding.
July 14, 1927.

2773

395. Salix laevigata. Bebb.

Young trunks and branches with smooth bark, old trunks with very rough bark. The two specimens of bark accompanying the sheet are from the same tree. Leaves green and shining above, white-glaucous below. With the preceding.
July 14, 1927.

396. Jussiaea californica. Jepson.

Plants growing in wet ground and shallow water. Petals yellow. Growing in semi-shaded place on the Santa Ana River bottom at the Rancho Santa Ana. July 14, 1927.

397. Raphanus sativus L.

Petals lavender with purple veins. Near the preceding in moist soil. July 14, 1927.

2774

398. Oenanthe sarmentosa. Presl.

Flowers white. Near the preceding in shaded moist situation. July 14, 1927.

399. Juncus torreyi Coy.

Flowers in globular heads, brownish. Near the preceding in more open situation. July 14, 1927.

400. Lemna ~~trirsculs~~ trisulca L. 2776

Forming dense masses in shallow water in a slowly moving stream in swampy place near the preceding, the plants submerged. July 15, 1927.

401. Lippia lanceolata Michx.

Growing in a moist, partially shaded situation near the preceding. July 15, 1927.

402. Helenium puberulum. DC.

Plants 2--3 ft. high. Rays yellow, reflexed. Disk spheroidal, greenish-yellow. In moist boggy place with the preceding.
July 15, 1927.

403. Lythrum californicum. T. & G.

Corolla rose-purple, Near the preceding but in somewhat drier soil. July 15, 1927.
River bottom, Rancho Santa Ana.

2777

404. Radicula nasturtium-aquaticum.
Britt. & Rendle.

Flowers white. In shallow water near the preceding. July 15, 1927.

405. Apium graveolens. L. 2778

Herbage with strong celery smell. Flowers white. In shaded moist ground near the preceding. July 15, 1927.

406. Centromadia pungens. Greene.

Rather depauperate plants growing in mucky soil near water. Flowers yellow. Near the preceding. July 15, 1927.

407. Cyperus laevigatus. L.

In wet soil near the preceding.
July 15, 1927.

408. Cyperus esculentus. L.

With the preceding.
July 15, 1927.

409. Rumex persicarioides. L.

In hot sandy soil in open situation near the preceding. July 15, 1927.

410. Senecio douglasii. DC. 2779

Shrub 3 ft. high. Flowers yellow. Growing in the botany garden on southern slope near orchard no. 1. July 16, 1927.

411. Eriogonum gracile Benth. 2781

Flowers yellowish or whitish with pink mid-vein. In sandy soil on the ridge south of the house in the botany garden.
July 16, 1927.

2782

412. Gnaphalium beneolens Davv.

Flowers yellow. Near preceding.
July 16, 1927.

villosa Jepson.

413. Zauschneria californica var.

Spreading plant with woody base. Flowers scarlet. On north-eastern slope in sandy soil near the preceding.
July 16, 1927.

2783

414. Photinia arbutifolia. Lindl.

Shrub 12 ft. high. Flowers with white petals. On north-east slope of ridge south of house. July 16, 1927. Botany Garden.

2784

415. Rhus laurina. Nutt.

Round-topped shrub about 10 ft. high. Flowers yellowish-white. On western slope of deep canon west of house. July 16, 1927. Botany Garden.

416. Cotyledon pulverulenta. Brew. & Wats.

Often forming very large rosettes. Leaves and stalks covered by heavy white powder that has waxy feel. Flowers red. Near preceding. July 16, 1927. Botany Garden.

2785

417. Asclepias eriocarpa Benth.

Densely woolly herbaceous plants from deep perennial root. In hard clay soil on the flat just to the north of the house, botany garden. July 16, 1927. B

2786.

418. Grindelia camporum Greene var.

Involucres gummy, the buds exceedingly so with whitish gummy substance. Flowers yellow. Rays present or absent on the same plant, if present generally very small and inconspicuous. With the preceding. July 16, 1927.

Type Collection of
Grindelia bracteosa J.T. Howell.

cmw.

2787

419. Artemisia dracunculus L.

Growing in dry soil on western slope of hillside along the highway between Tustin and Laguna Beach, about 2 miles north-east of the latter. Forming clumps. 400 ft. July 17, 1927.

2788

420. Atriplex leucophylla Nieto.

Prostrate plants growing in hard, dry sandy soil on level ridge top. On coast highway short distance (about 1 mile) to north of Laguna Beach. July 17, 1927.

2790

421. Phacelia ramosissima var. suffrutescens. Parry.

Very tall plants, growing up among shrubs to height of 8--10 ft. Otherwise similar to the form growing on the Rancho Santa Ana. Found at the base of bluff with eastern exposure, near the preceding. July 17, 1927.

422. Eleocharis capitata. R. Br.

In sandy stream bed, now nearly dry. Santa Ana River bottom, Rancho Santa Ana below ranch houses. July 18, 1927.

423. Juncus rugulosus. Engelm. 2792

Near preceding.
July 18, 1927.

2793
2793

424. Echinochloa crus-galli

Near preceding. River bottom below ranch house July 18, 1927. Some of the young florets have long and conspicuous awns. Rancho Santa Ana.

425. Anthemis cotula. L.

Ray-flowers white, the disk-flowers yellow. Near the preceding in moist soil. July 18, 1927.

426. Petunia parviflora. Juss.

Low and spreading herbswith somewhat glandular herbage. Flowers purplish, becoming paler in the throat. Near preceding, Santa Ana River bottom, Rancho Santa Ana. July 18, 1927.

427. Juncus phaeocephalus var. paniculatus Engelm.

In moist ground near the preceding. July 18, 1927.

428. Alyssum maritimum Lam.

Flowers white. The plant perhaps from seed carried down the river in time of high water. Near the preceding. July 18, 1927.

429. Melilotus indica. All.

Flowers yellow. Herbage very fragrant on drying. July 18, 1927. Near the preceding.

430. Chenopodium anthelminticum L.

Herbage with a reddish tinge. Near the preceding.
July 18, 1927.

431. Gnaphalium palustre Nutt.

Growing in wet, sandy soil on a bar near the summer channel of the Santa Ana River. Near preceding.
July 18, 1927.

432. Cotula coronopifolia. L.

Flowers yellow. Herbage succulent. Growing in wet soil near the preceding.
July 18, 1927.

433. Plantago major. L.

Near the preceding.
July 18, 1927.

434. Scirpus cernuus. Vahl.

In moist or wet soil near the preceding.
July 18, 1927.

2795

435. Cenchrus pauciflorus Benth.

In moist soil growing up through piles of drift deposited by the river in high water.
Not common. July 18, 1927.

436. Juncus balticus. Willd. 2796

Near the preceding.
July 18, 1927.

437. Ranunculus cymbalaria. Pursh. 2797

Plants spreading by runners which root and produce new plants at nodes. Petals shining, yellow. In moist marshy place in the Santa Ana River bottom near the preceding. Rancho Santa Ana just below the houses.
July 19, 1927.

438. Samolus floribundus. H.B.K.

Herbage succulent or slightly so. Flowers with white corolla. With the preceding.
July 19, 1927.

2800

439. Cyperus melanostachyus H.B.K.

Spikelets brownish. In wet ground or shallow water with preceding. July 19, 1927.

holosericeum Jepson.

440. Epilobium californicum var. ?

Growing along edge of marshy land but a little higher where the soil is better drained. July 19, 1927. River bottom near ranch houses. Rancho Santa Ana.

2802

441. Hydrocotyle umbellata L.

Stems creeping on wet soil in marshy place. Flowers yellowish. Occurring with no. 437. July 19, 1927. River bottom near ranch houses, Rancho Santa Ana.

2803

442. Typha angustifolia L.

Stems about 12 ft. high. Growing in marsh near preceding. July 19, 1927.

443. Melilotus alba. Desr.

In dry sandy soil in shaded situation near the preceding. July 19, 1927.

2805

444. Scirpus americanus Pers.

In marsh with no. 442. Stems varying from about 2 to 8 ft. high.
July 19, 1927. River bottom near ranch houses. Rancho Santa Ana.

445. Sisyrinchium bellum. Wats.

Flowers blue. Growing among grasses in rather dry soil. Near preceding.
July 19, 1927.

446. Sporobolus asperifolius Nees & Mey.

With preceding but in somewhat drier and sandy soil.
July 19, 1927.

447. Conium maculatum. L.

Flowers white. In dryish, semi-shaded situation on the Santa Ana River bottom, Rancho Santa Ana just below the ranch houses. July 19, 1927.

2806

448. Verbena urticifolia L.

Plants somewhat spreading. Flowers lavender. With preceding. July 19, 1927.

2807

449. Eleocharis rostellata. Torr.

Stems very tall, up to 6 or 8 ft. The stems bending over and rooting. In marsh in the Santa Ana River bottom on the Rancho Santa Ana just below the ranch houses. July 21, 1927.

450. Lemna cyclostasa Chev.

Floating plants in water near the preceding. July 21, 1927.

2809

451. Populus trichocarpa. T. & G.

Tree with mostly smooth light grey bark. Leaves dark green above, silvery beneath. Near the preceding. July 21, 1927.

452. Alnus rhombifolia. Nutt. 2810

Tree with slightly fissured bark, greyish. Near the preceding. July 21, 1927.

453. Gnaphalium chilense Spreng.

Flowers yellow. Plants growing in dry sandy soil on high well drained land near the preceding. July 21, 1927.

2813

454. Trifolium involucratum Gr.

In shallow water with other water plants such as rushes, sedges, Jussiaea, Samolus, etc. Santa Ana River bottom near the preceding. July 21, 1927.

2814

455. Cuscuta subinclusa D.& H.

Stems very succulent, generally yellow but sometimes with a greenish caste. Flowers yellowish-white, waxy. Most common host is Salix, apparently young clumps of S. laevigata. Near preceding. July 21, 1927.

2815

456. Pluchea sericea Cov.

Shrubs about 10 ft. tall, the stems with smooth bark. Flowers lavender-rose. Growing in dry situation on the Santa Ana River bottom, Rancho Santa Ana, just below the ranch houses. July 21, 1927.

457. Marubium vulgare. L.

Bushy plant in arroyo in botany garden east of the house. July 22, 1927.

2816

458. ~~Ericameria~~ Gutierrezia parothrae Britt & Rusby.

Low bushy plants with few to many stems from perennial base. Flowers yellow with rays. Involucre tightly imbricated and very sticky-glandular. In clay soil on the flat just to the north of the house. July 22, 1927.

2817

459. Atriplex bracteosa Wats.

Plants prostrate or at least low and spreading. Growing along the road in clay soil above the garden. July 22, 1927.

2818

460. Cryptanthe flaccida. Greene.

Much-branched bushy plants growing in loose soil of a road-fill along the road at the summit above the garden, near the preceding. July 22, 1927.

2819

461. Philibertia heterophylla Jepson.

Corolla-lobes greenish outside, sometimes with purple tint at tip. Inside greenish-white with purplish tip. Hoods very white, shining. On bank of arroyo between orchards 3 and 4, partially shaded. With Phacelia ramosissima, Salvia mellifera, Baccharis viminea, Sambucus glauca. The herbage has a nauseating odor that suggests both the rind of cucumber and onion though far worse than both. July 24, 1927. Rancho Santa Ana.

2820

462. Eriogonum thurberi Torr.

Same as no. 52, the specimens collected with achenes which are black and shining. In deep sand on canal bank just below the canal intake at east end of the ranch. July 24, 1927. Rancho Santa Ana.

2821

463. Sisymbrium altissimum. L.

Specimen collected for nearly mature siliques, same as no. 48. This specimen collected on the sand bluff of the Santa Ana River flood-plain near the preceding.
July ~~22~~ 24, 1927.

2823

464. Pluchea sericea Cov.

Shrubs 3--6 ft. high growing with Baccharis viminea, Croton californicus, Artemisia californica, Sambucus glauca, Rhus diversiloba. On the dry, shady flats of the Santa River bottom above the flood-plain near the preceding.
July ~~22~~ 24, 1927.

2824

465. Rhamnus crocea var. ilicifolia Greene (Kellogg) ?

Five to 15 ft. high, generally several trunks from base forming broad-topped shrub, sometimes arborescent. Bark silver-grey, smooth or on old plants shallowly checked. Berry red, somewhat translucent. With Rhus laurina, Ceanothus macrocarpus, Heteromeles arbutifolia, and lower shrubs on the floor of Claymine Canon near its lower end. July ~~22~~ 24, 1927. alt. c. 500 ft.

2826

466. Rhus laurina. Nutt.

With the preceding. Many smooth-barked trunks from the base. Fresh bark smelling like green peach. 6--8 ft. high forming broad bushy shrub.
July ~~22~~ 24, 1927.

2827

467. Nolina parryi. Wats.

Plants with very short stems thickly covered with long stiff leaves, or sometimes with a distinct trunk up to 4 ft. high and free from leaves, except of course at the top where there is a dense tuft. Inflorescence on stout stalk with reduced leaves and bracts, the inflorescence about 4 or 5 ft. long and little less than half as wide. The specimins are branches of the inflorescence. Fruit with membranous wings, pale yellowish sometimes with brownish lines. Growing on the sandstone bluffs along the road in the lower part of Claymine Canon. In the upper part of the canon it is found on sandy and gravelly slopes of the canon floor. July 22, 1927.
24

2828

468. Ceanothus macrocarpus. Nutt.

This specimen from an arborescent plant with 2 main trunks each dividing just above base and without branches for 6--8 ft. About 15 ft. high. Bark dark grey, shallowly and finely checked. Trunk with many deep oblong pits, 1--3 in. deep and up to 1 1/2 ft. long, giving the tr trunk a corded appearance. Near preceding but on the canon floor. July 22, 1927.
24

2829

469. Philibertia heterophylla Jepson.

Plants in fruit. Near the preceding. July 22, 1927.
24

470. Tetradymia comosa. Gray. 2831

Shrubs 2--3 ft. high growing on the sandy, rocky floor of Claymine Canon in open places near the preceding. Flowers pale yellow. July 22, 1927.
24

2832

471. Eriogonum gracile Benth.

Flowers yellowish-green. This is undaubtedly the same species as the one growing onthe hills of the botany garden but here the plants are much larger. With the preceding. July 22, 1927.
24

2833

472. Romneya coulteri. Harv.

Shrubs 5--7 ft. tall, up to 12 ft. The bark of oldest wood smooth, greenish-brown. The seed is from last year's fruit, which seems to be opening by disintegrating. Common shrub on the canon floor with the other shrubs mentioned--see no. 465. July 22, 1927.
24

2834

473. Selaginella bigelovii. Underw.

Growing abundantly on the hot and exposed opens between shrubs on very steep hillsides or in the cracks and crevices of the sandstone outcrops on the sides of Claymine Canon. July 22, 1927.
24

2835

474. Eriogonum fasciculatum. var. foliolosum Stokes.

Plants about 2 ft. high. The dense head-like flower-clusters very noticeable. This was the only shrub with this type of inflorescence. July 22, 1927. Near no. 464.
24

2836

475. Eriogonum fasciculatum. var. foliolosum Stokes.

About 200 yards from the preceding and showing type of inflorescence tending toward the other extreme of branching. Forms intermediate between the two are commonest. July 22, 1927.
24

2837

476. Delphinium cardinale Hook.

In loamy sandy soil at foot of a bluff in the fork of Claymine Canon which runs southwest from the upper main canon towards Sierra Peak, the same canon where nos. 254 to 263 were collected. The plants shaded by Platanus racemosa and Quercus agrifolia; also Rhus laurina, R, diversiloba, Rhamnus crocea var. ilicifolia, Pentstemon cordifolius, Phacelia ramosissima, Artemisia californica. The flowers scarlet. July 26, 1927. E. c. 800 ft.

477. Phacelia hispida. Gray. 2838

This plant unusual for the extra long racemes which have developed. Near the preceding. July 26, 1927.

478. Acer macrophyllum. Pursh. 2839

Trees with grey or silvery-grey bark, later becom- dark greyish-brown and rather deeply checked and furowed. In the bottom of the canon with the preceding. July 26, 1927.

2841

479. Lilium humboldtii. Roezl. & Leichtl.

Bulb solid, scaly with fleshy leaf-bases, about 1--2 in in diameter. The capsule bluntly 3-angled. In deep loamy soil on a talus slope below bluffs (where no. 262 was collected). July 26, 1927.

2842

480. Zauschneria californica Presl.

Bushy plants about 2 ft. high with scarlet flowers. Growing in dry sandy soil near the preceding. July 26, 1927.

2843

481. Rhus ovata. Wats.

G 182

Much-branched, round-topped shrubs 6--8 ft. tall. Growing in the dry soil in the upper part of Claymine canon which is occupied throughout its length by a steeply sloping alluvial wash. July 26, 1927. El. 700 ft.

2844

482. Fraxinus dipetala H. & A. G-222

G 222

Oldest part of trunk dark brownish-grey shallowly checked. The main branches smooth and grey. Arborescent shrub about 15 ft. high with a single main trunk. Near the preceding in the upper part of Claymine Canon. July 26, 1927.

2845

483. Atriplex semibacata. R. Br.

Low spreading perennial herb about 3 to 6 in. high generally, the branches sometimes a ft. or more long. The fruiting bracts becoming fleshy and red. Common about the ranch houses, Rancho Santa Ana. July 27, 1927.

2846

484. Helianthus annuus L.

Rays bright yellow, the disk-flowers brownish. Tall annual herbs often over 6 ft. tall. With the preceding. July 27, 1927.

2847

485. Juglans californica Wats.

Tree with rough dark brown bark. Growing along the road near the ranch houses, Rancho Santa Ana. July 27, 1927.

2848

486. Chenopodium murale L.

The low plants are from deep sandy soil in the Santa Ana River bottom, the branch from a robust specimen growing in sandy loamy soil in orchard no. 5. July 27, 1927.

487. Anagallis arvensis L.

Spreading herbs. Growing in sandy soil in a shaded situation on the Santa Ana River bottom. July 27, 1927.

2849

488. Cynodon dactylon Pers.

Near the preceding. July 27, 1927.
Forming turf in the river bottom.

489. Panicum barbipulvinatum Nash.

With the preceding.
July 27, 1927.

2850

490. Chenopodium album L.

Tall herbs of dry clay soil. Near the ranch-houses.
July 27, 1927. Rancho Santa Ana.

491. ~~Mimulus~~ Minetanthe pilosa Greene.

Erect herbs with wet-viscid herbage. Corolla nearly regular, with two dark brown spots in the lowers part of the throat. In sandy soil, Santa Ana River bottom. July 27, 1927.

492. Mimulus floribundus Dougl.

Branches from the base long and spreading, the herbage viscid. Calyx angled. Flowers yellow. With the preceding. July 27, 1927.

2851

493. Plantago hirtella H.B.K.

In moist ground in almost total shade. Near the preceding. July 27, 1927.

2853

494. Datura tatula L.

The calyx angled. The corolla white heavily tinted with purplish, especially on the limb. In sunny place near the preceding. July 27, 1927.

2854

495. Xanthium canadense Mill.

With the preceding.
July 27, 1927.

2855

496. Lactuca scariola L.

Plants 4--6 ft. high, the stem single from the base. Ligules yellow, rather deeply 5-lobed at the apex. On the railroad embankment near the ranch houses, Rancho Santa Ana. July 27, 1927.

2856

497. Amaranthus graecizans L.

With the preceding.
July 27, 1927.

498. Medicago sativa. L.

Flowers purplish-blue. With the preceding.
July 27, 1927.

2857

499. Salsola kali var. tenuifolia. G.F.W. Mey.

Fruiting bracts showy, deep pink or reddish.
With the preceding. July 27, 1927.

2858

500. Foeniculum vulgare. Gaertn.

Near the preceding.
July 27, 1927.

2859

501. Holcus halepensis L.

With the preceding.
July 27, 1927.

2860

502. Amaranthus hybridus L.

In loamy soil in orchard no. 5.
July 27, 1927. Rancho Santa Ana.

2862

503. Trichostema lanceolatum Benth.

Herbage strong smelling. Corolla-tube exserted from calyx and recurved, the mouth of the tube opening upward, the roof of upper part of the throat against the the roof of the lower part; the 3 lobes of lower lip extending downward, the 2 upper nearly erect and spreading widely, all lavender except the middle lobe of lower lip which is marked heavily with purple. Stamens and pistil curving back over top of calyx in semicircle. A bee to get honey must straighten out the corolla-tube and in so doing dusts his back with the anthers and also brings the style against his back and the pollen from another flower. On the railroad just to the west of the ranch houses in clay soil, Rancho Santa Ana. July 28, 1927.

2863

504. Cucurbita foetidissima H.B.K.

Herbs with trailing stems and unpleasant smelling herbage. Flowers monoecious, yellow, with a rather agreeable perfume. Near the preceding. July 28, 1927.

2864

505. Lepidospartum squamatum Gray.

Shrubs 2--3 ft. high, much-branched from the base. Flowers yellow. Growing on the railroad embankment near the walnut grove. July 28, 1927. Rancho Santa Ana.

506. Selaginella bigelovii. Underw.

Growing in dry sandy soil on the sandstone ridge that extends outward from the east side of Nolina Canon which is just to the west of Bee Canon, Rancho Santa Ana. July 28, 1927.

507. Nolina parryi Wats.

Growing on the top of the sandstone ridge in Nolina Canon near the preceding.
July 28, 1927.

508. Tetradymia comosa. Gray.

Shrubs about 3 ft. high. Flowers yellow. With the preceding, also with Gnaphalium beneolens, Stillingia linearifolia, Eriogonum fasciculatum. Rhus laurina, Salvia mellifera, Encelia californica, Croton californica.
July 28, 1927.

2865

509. Porophyllum gracile Benth.

Low bushy plants about 1 ft. high. The herbage glaucous. Corolla whitish or with a purplish tinge, and with a purple line in the corolla-tube below the sinuses. The style-branches stigmatic only on the lower half. Near the preceding, growing on sandstone outcrops.
July 28, 1927.

2866

510. ~~Ericameria~~ Gutierrezia sarothrae Britt. & Rusby.

Somewhat spreading plants with distinctly woody base. Flowers yellow. The number of rays per head on one plant appears to be nearly constant at least for several that were carefully examined. The commonest numbers were 5 and 8, though the number varied from 3 to 8.
Near the preceding. July 28, 1927.

2867

511. Calycadenia tenella J.+G.

Rays 3 or 4, the 2 lateral lobes with purple spot in the middle; the disk flowers with tiny purple dot below each lobe in the throat. In sandy soil on bench on the ridge near the preceding. July 28, 1927.

512. Silene laciniata Cav.

Corolla bright red, each petal with ~~three~~ four lobed apex. Near the preceding. July 28, 1927.

2869

513. Physalis ixocarpa. Brot.

Annual herb with erect spreading branches. Corolla-limb greenish-yellow, reflexed. The throat with 5 greenish-brown spots, the tube with short whitish hairs. Filaments purplish-blue. In the walnut grove, Rancho Santa Ana. July 28, 1927.

514. Picris echioides. L.

Stem erect, 2--3 ft. high. Flowers yellow, tinged with purple beneath. Along the railroad near orchard no. 1. July 29, 1927.

515. Adenostoma fasciculatum H.+A.

Shrub 3--5 ft. high growing on the steep ridges and bluffs along the eastern boundary of the ranch. At this time of year the brownish hue of the inflorescence tints whole hillsides and is very noticeable. July 29, 1927.

2870

(nutt.) Benth. & Hook.

516. Rhus integrifolia. ~~B. & H.~~

Specimens showing much-toothed leaves were found growing on the hot exposed southern slopes with the preceding. July 29, 1927.

2871

517. Rhus ovata. Wats.

Specimens showing toothed leaves found growing with the preceding. July 29, 1927.

2872

518. Cordylanthus rigidus. Jepson.

Corolla outside white, the teeth greenish-yellow. Inside the tube greenish, the upper lip with large purple blotch. Growing in the chaparral near the preceding and also Ericameria monactis, Eriogonum fasciculatum, Artemisia californica, Salvia mellifera. July 29, 1927.

2874

519. Atriplex canescens James.

Bushes 4--5 ft. high growing in the dry stream-bed just to the east of orchard 4.
July 29, 1927.

2875

520. Krameria canescens Gray. G-195

G195

Much-branched, broad-topped shrubs 2--3 ft. high. Flowers purplish-rose. Growing on the mesa between the east end of San Gorgonio Pass and Morongo Pass, in dry sandy bouldery situation. Aug. 1, 1927. El. c. 1500 ft.

2876

521. Euphorbia polycarpa Benth.

Plants prostrate or some with branches semi-erect as if lifting the more succulent parts off the scorching sands. Glands with very narrow whitish margin. With the preceding. Aug. 1, 1927.

2877

522. Lythrum californicum T. & G.

Flowers seem to be unusually large. Petals lavender. In wet ground on Mission Creek, T Cross K Ranch about 5 miles north of the San Gorgonio Pass highway. Aug. 1, 1927. El. c. 2000 ft.

523. Eleocharis montana R. & S. 2878

In wet ground on under water with the preceding. Aug. 1, 1927.

2879

524. Prosopis pubescens Benth. G-187

G187

Shrubs over 6 ft. tall hrowing in the moist bottom of Mission Creek at T Cross K Ranch. The mature pods are light yellow.
Aug. 1, 1927.

2880

525. Chilopsis. linearis G. Don. G-186

G186

Smaller trees growing with the preceding. Some corollas are whitish or pale lavender with few or no markings, others are as described in no. 310. Aug. 1, 1927.

526. Castilleja affinis var. linearifolius Gelb.

Stems up to 4 ft. high. The scarlet inflorexcences making a fine show along Mission Creek with the preceding. Aug. 1, 1927.

527. Encelia actoni Elmer. G-188

G 188

Rounded bushy plant about 2 ft. high growing on sandy flats near T Cross K Ranch. Aug. 1, 1927.

528. Argythamnia sericophylla Gray.

Growing in sandy soil about 3 miles south and east of Morongo Pass Between there and T Cross K Ranch. Aug. 1, 1927. El. c. 1500.

2883

529. Phoradendron Californicum. Nutt.

Forming an oblongish, droppingbush in Acacia greggii which grows on steep rocky slope with southern exposure in the canon just to the south of Morongo Pass, the canon through which the road passes. Aug. 1, 1927. El. c. 2000.

2884

530. Acacia greggii Gray. G-171

Gray

Shrub 4--6 ft. high growing on rocky wash on floor of canon near preceding. Legumes much twisted and undulate. Aug. 1, 1927.

2885

531. Pencephyllum schottii Gray.

Dense, rounded shrub with very glandular dark green herbage. Near the preceding. Large number of achenes but no flowers were seen. Aug. 1, 1927.

2886

532. Notholaena parryi. Eat.

Growing in sandy or gravilly soil under socks on steep canon wall near the preceding. The fronds were all rolled and dry and very brittle.
Aug. 1, 1927.

2886A.

532A. Selaginella bigelovii Underw.

With the preceding. Fairly common but not covering large patches. Aug. 1, 1927.

2887

533. Thamnosma montana. Torr. & Frem. G-192
G 192
Broad, much-branched shrubs generally 1--3 ft. high. Stem conspicuous light yellow. In gravelly soil at west end of Morongo Valley just at the point where the road descends into the Morongo Pass and canon. Aug. 1, 1927. El. 2500 ft.
30

534. Condalia parryi (Torr.) Weberb. 2888 G-193.
G193
Spiney-branched shrubs 6--8 ft. tall. Fruit smooth, yellow. In section the stone sometimes shows only one embryo but generally 2 or 3. Near the preceding. Aug. 1, 1927.

2889

535. Eriogonum nodosum var. jaegeri M. & J.

Branches of the inflorescence spreading horizontally and zigzag. Flowers whitish. Near the preceding in sandy soil at the west end of Morongo Valley. Aug. 1, 1927.

2890

536. Hugelia eremica Jepson.

Corolla blue, the lower sinus more deeply cleft and broader and hence the limb appears irregular. El. 3000

2891

537. Coleogyne ramosissima Torr.

Very rigidly branched shrubs, 2--3 ft. high. The blooming time past but no mature fruit was found. Growing on a rocky talus slope. Near east end of Morongo Valley. Aug. 1, 1927. El. 3000

2892

538. Baileya multiradiata var. pleniradiata Coov.

Rays yellow. Between east end of Morongo Valley and Warren's Well. The number of flowers found on the specimens for this time of year isprobably in part due to the thunder showers in the region recently, the soil being still moist in places. These showers are probably responsible for several other tings found in bloom. Aug. 1, 1927. El. 3000

2893

539. Eriogonum angulosum Benth.

Common on sandy flats along the road with the preceding. Aug. 1, 1927.

2894

540. Eriogonum davidsonii Jepson. molestum var.

Flowers almost pure white. With the preceding. Aug. 1, 1927.

2895

541. Eriogonum mohavense Wats.

Flowers greenish-yellow, the aspect of the plant greenish. With the preceding. Aug. 1, 1927.

2896

542. Petalonyx thurberi Gray. G-197.

G197

Flowers white, bracts whitish. In full bloom, the hemispherical mounds are conspicuous because of their whiteness. With the preceding. Common also on washes in this vicinity and in the northern end of the Colorado Desert. Shrubs 2--3 ft. high usually. Aug. 1, 1927.

2897

543. Eriogonum trichopodium Torr.

Flowers yellow. Aparently annual or biennial. With the preceding. Aug. 1, 1927.

2898

544. Croton californicus Muell. Arg.

Common on sandy, gravelly wash at Warren's Well to east of Morongo Valley. Aug. 1, 1927. Alt. 3000

2899

545. Nicotiana attenuata Torr.

Flowers whitish. The viscid herbage of this rather rank herb has a very disagreeable or strong odor. With the preceding. Aug. 1, 1927.

2900

546. Prosopis juliflora var. glandulosa Cckll.

Broad shrub, about 8 ft. high. Flowers greenish-yellow. At Warren's Well. Aug. 1, 1927.

2901

547. Eriogonum fasciculatum. var. polifolium T & G.

G190

Plants 1--3 ft. high. On gently sloping ground along road just to east of summit of gap at east end of Morongo Valley. Common. Aug. 1, 1927. G-190

2902

548. Tetradymia stenolepis Greene.

Flowers yellow. Bushy shrubs, 2 1/2 ft. high, growing with the preceding. Aug. 1, 1927.

2903

549. Larrea tridentata var. glutinosa. Jepson

Along the road near the east end of Morongo Valley. Aug. 1, 1927. El. 3000

2904

550. Stillingia linearifolia Wats.

With the preceding.
Aug. 1, 1927.

2905

551. Lepidospartum squamatum Gray.

Much branched from base forming a rounded shrub 2--3 ft. high. Flowers yellow. In bed of wash in lower end of Canon below Morongo Pass near place where nos. 532 and 532A were collected. Aug. 1, 1927.

2907

552. Cheilanthes covillei. Maxx.

Growing under rocks and in crevices on the road between Banning and Strawberry Valley of Mt. San Jacinto a few miles out of Banning. Aug. 2, 1927. El. 2200 ft.

2909

552A. Lessingia glandulifera. Gray.

Flowers yellow. Growing in open places or under trees in Strawberry Valley near camp Idyllwild. Aug. 2, 1927. El. 5500.

2910

553. Monardella lanceolata. Gray.

Herbage fragrant. Flowers purple. With the preceding. Aug. 2, 1927.

2911

554. Pentachaeta aurea Nutt.

Flowers, both ray and disk, yellow. Mostly in partial shade under trees with the preceding. Aug. 2, 1927.

2912

555. Astragalus douglasii Gray.

Pods highly inflated. Growing under pines and in open places near the preceding. Aug. 2, 1927.

556. Eriogonum wrightii var. membranaceum Stokes.

Plants forming low spreading mats. With the preceding. Aug. 2, 1927.

2917

557. Potentilla bolanderi var. bernardina Jepson.

Flowering stems from very leafy, much-branched base. Petals white. With preceding, Strawbery Valley, Mt. San Jacinto at Idyllwild.
Aug. 2, 1927.

558. Swertia parryi Ktze. 2914

Leaves white margined. Petals greenish-white, the part above the gland purple-spotted, 2 green spots between the gland and margin, the base unspotted. The gland fringed on either side, the two fringes approximate. Stamens and pistil on

square disk withpurplish spots on either side of filaments which are faintly spotted. Near the preceding on sw. slope mostly shaded by Pinus ponderosa. Aug. 2, 1927.

2915

559. Phacelia heterophylla. Pursh.

Semi-shaded place near preceding. Not common. Aug. 2, 1927.

2917

560. Corethrogyne filaginifolia rigida gray. var.

Rays rose-purple, disk yellow. Common under treeswith preceding. Aug. 2, 1927.

2918

561. Phacelia brachyloba. Gray.

Corolla-limb white, throat clear yellow. Growing in loose granitic sand along the road between Idyllwild and Keen Camp, short distance below former. Aug. 2, 1927.

2919

562. Mimulus bigelovii gray.

Corolla rose-purple, marked in the throat. With the preceding. Aug. 2, 1927.

2920

563. Oxytheca trilobata Gray.

Plant prostrate, forming mats up to 5 ft. in diameter. With preceding. Aug. 2, 1927.

2921

564. Lotus stigosus var. hirtellus Ottley.

Stems prostrate. Growing in granitic sand on road fill between Idyllwild and Keen Camp with the preceding. Aug. 2, 1927.

2922

565. Oenothera micrantha var. hirtella Jepson.

Corollas yellow or tinted with rose. With preceding. Aug. 2, 1927.

2923

566. Cryptanthe muriculata Greene.

With the preceding.
Aug. 2, 1927.

2924

567. Phacelia minor. Thell.

Rather rank plants with glandular herbage. Corolla campanulate, slightly contracted in upper part of throat, purple the inside with 5 yellowish spots. Growing on loose soil of road fill about half way between Idyllwild and Keen Camp. Aug. 2, 1927.

2925

568. Scutellaria bolanderi gray var.?

Plant with numerous slender stoloniferous branches at base. Corolla white the lower lip pale blue with purple band or spots of middle lobe. In moist or wet sandy soil in stream bed of creek near top of control road to Hemet, atl. circa 4500 ft. Aug. 2, 1927. Ca. c. 4500 ft.

2929

569. Lessingia glandulifera. Gray.

Growing in open grassy places between well developed specimens of Quercus kelloggii, soil dry, sandy. Aug. 2, 1927. Near preceding.

2930

570. Eriogonum nudum Dougl.

Flowers buff. With the preceding. Aug. 2, 1927.

2932

571. Polystichum munitum Presl.

In sandy soil under rocks on steep nw. slope near preceding. Aug. 2, 1927.

2933

572. Zauschneria latifolia Greene.

Corolla and Calyx scarlet. Under rocks near the preceding. Aug. 2, 1927.

2934

573. Monardella macrantha. var. longiloba Abrams.

Making thin mats in shallow soil over rocky outcrops. Corolla bilabiate, beautiful pale salmon-yellow. In almost complete shade along the Hemet r road just below the preceding. Aug. 2, 1927.

2935

574. Hugelia densifolia Benth.

Flowers deep blue. On steep hillside in rocky soil with the preceding.
Aug. 2, 1927.

2936

575. Quercus chrysolepis. Liemb.

Trunk finely furrowed and dark at first, later becoming light grey and smoother. Common on the rocky slopes along the road between Idyllwild, Mt. San Jacinto and Hemet just above the chaparral.
Aug. 2, 1927.

2937

576. Quercus dumosa. Nutt.

Shrub 6 ft. high. Trunk smooth, dark silver-grey, later flakey-roughened. With the preceding. Aug. 2, 1927.

2938

577. Quercus wislizenii. var. frutescens Engelm.

Shrubby, 5--8 ft. high; the bark smooth, dark grey. With the preceding, in deep shade. Aug. 2, 1927.

2939

578. Isocoma veneta var. and
setoides Jepson.

Stems spreading from a woody base and formig a mat. Flowers yellow. This is perhaps the same thing seen at Laguna, there nearly erect in more sheltered location. On the first rise just back from the beach between Oceanside and Cardiff-by-the-Sea. Aug. 6, 1927.

2940 G-20

579. Eriogonum parvifolium. Sm.

G 201

Stem prostrate. Leaves glabrous above, conspicuously white-tomentose below. Flowers whitish, often pleasantly shaded and veined with pink. With the preceding. Aug. 6, 1927.

2941

orcuttiana Hall.

580. Chaenactis glabriuscula var.

G 203 G-203

Flowers yellow, the outer corollas somewhat enlarged. Plants spreading widely at base but erect. With preceding. Aug. 6, 1927.

2942 G-202

581. Eriogonum fasciculatum. var. G202 foliolosum Stokes.
Plants much-branched, forming a dense mound 5 or 6 ft. high. The stems touching the ground, rooting. Near Cardiff-by-the-Sea. Just back from the beach. Aug. 6, 1927.

2943

582. Eriogonum fasciculatum. Benth.

Near the typical form of the species, the outside of the corolla nearly or quite glabrous. Bushy but flat-toppedplants, about 3 ft. tall. Flowers with pink tinge. Near the preceding. Aug. 6, 1927.

2944

583. Cotyledon caespitosa Haw.

Basal leaves glaucous, rounded and slender. Petals deep reddish with yellowish tinge. In the sand near the preceding. Aug. 6, 1927.

2945? G-204

584. Pinus torreyana. Parry.
G 204
From the Torrey Pines on the sea bluffs just ot the south of Del Mar. Aug. 6, 1927.

2946

585. Corethrogyne filaginifolia var. pacifica Hall.
Rays lavender, disk yellow. In sandy soil under the Torrey Pines. With the preceding. Aug. 6, 1927.

2947 G-206 (?)

586. Rhamnus crocea. Nutt.
G 206
Much-branched, rigid shrubs, 3--4 ft. high with succulent red fruit. Near the preceding. Aug. 6, 1927.

2948

587. Selaginella bryoides. Underw.

Forming a flat covering on the sandy slopes under the Torrey Pines and about them. Aug. 6, 1927.

2949

588. Gymnogramme triangularis Kaulf.

Fronds leathery-coriaceous, rich gold on back. Growing along sandstone outcrops in sandy soil near the Torrey Pines just south of Del Mar. Aug. 6, 1927.

2950 G-207

589. Calochortus weedii. Wood.

G 207

Capsules similar in shape to those found on Rancho Santa Ana. With the preceding. Aug. 6, 1927.

2951

590. Cordylanthus rigidus Jepson.

With the precedihg. Common. Aug. 6, 1927.

2952

591. Salvia clevelandii Gray. G208.

G 209

Plants about 2 ft. high. Corolla bluish-purple. Herbage with very delightful fragrance suggestive of garden lavender. On the U. S. reservation along the highway south of the Torrey Pine Park. Aug. 6, 1927. El. c. 300 ft.

2953

592. Corethrogyne filaginifolia var. rigida Gray.

Rays lavender-purple, disk yellow. Growing on the north slope of a branch canon amidst brushy plants, Rose Canon, east of La Jolla. Aug. 6, 1927.

El. c. 150

2954

593. Diplacus puniceus Nutt.

Corolla rich maroon-red, the throat with two white and yellow lines. Herbage and inflorescence sticky-glandular. Branch of Rose Canon with preceding. Aug. 6, 1927.

2955

594. Isomeris arborea var. globosa Cov.
G-211
G-211
Flowers yellow. Pods globose-inflated. Shrubs 3--4 ft. high growing on eastern slope along road in Rose Canon, near preceding. Aug. 6, 1927.

There is no.595.

596. Hemizonia fasciculata D.+q. 2956

On the mesa to the north of SanDiego across the marshland which is just north of "old Town". Most of the plants finished blooming. Aug. 6, 1927.
a. 300 ft.

597. Hemizonia virgata Gray. 2957

With the preceding, but this species just beginning to bloom. Herbage very glandular. Flowers yellow. Aug. 6, 1927.

2958

598. Gutierrezia sarothrae Britt.+Rusby

Flowers yellow, rays usually 4, 5, 6, or 8. Growing on grassy hillside, several miles se. of La Mesa, San Diego Co. Aug. 7, 1927. a. c. 250 ft.

2960

599. Quercus engelmannii Greene.

Young leaves pubescent becoming glabrate and with a blue-green appearance. Trees with light colored b bark. Growing along Dulzura Creek, Dulzura Ranch, San Diego Co. Aug. 7, 1927. a. 1000 ft.

2961

600. Quercus agrifolia. Nee

With the preceding. Well developed trees abundant along Dulzura Creek. Aug. 7, 1927.

2962

601. Tetradymia comosa Gray.

Growing in the chaparral on canon sides several miles south and somewhat east of Dulzura Ranch on the road to Campo. El. C. 1100 ft. Aug. 7, 1927.

2963

602. Quercus dumosa. Nutt.

With the preceding. Forming shrubs 6--8 to high. Aug. 7, 1927.

2965 G-214

603. Arctostaphylos bicolor. Gray.

G 214

With the preceding. Shrubs generally not tall, 4--5 ft. mostly. Beries smooth and shiney. Aug. 7, 1927.

2965

604. Cneoridium dumosum. Hook. f. G-215.

G 215

Generally low, much-branched shrub 1 1/2--3 ft. high. The trunk whth slight bulbous swelling generally at the ground. With the preceding. Aug. 7, 1927.

2966

605. Navarretia atractyloides H.+A.

Herbage with strong, disagreeable odor. Flowers rose-purple. Growing in packed soil of road-bed near preceding. Aug. 7, 1927.

2967

606, Haplopappus juncens Greene.

Stems few from a slight perennial base. Flowers br bright yellow. Growing in the chaparral on the rocky slopes along the road to Campo as it drops into Cottonwood Creek Valley, el. c. 1500 ft. Aug. 7, 1927.

2968 G-216.

607. Simmondsia californica. Nutt.

G 216

Bread intricately branched shrubs with coriaceous leaves. Plants apparently dioecious for the first 4 or 6 plants looked at bore none but staminate inflorescences, these now dead. One specimen was found in fruit and on this no staminate flowers were seen. With the preceding. Aug. 7, 1927.

2969

608. Gymnogramme triangularis Kaulf.

The waxy powder on the backs of the fronds is silvery white in color through which the green of the leaf shows slightly, thus giving the frond the appearance of green gold. Along the road to Campo between Cottonwood Creek and Potrero, growing in sandy soil among rocks is the chaparral. Aug. 7, 1927. El. c. 1500 ft.

609. Pellaea mucronata. Eat. 2970

Near the preceding.
Aug. 7, 1927.

2971

610. Cercocarpus betuloides Nutt.

G 217

Shrubs growing in the cahaparral along the road to Campo just below the place where the road divides, on branch going to Tecate. G-217
Aug. 7, 1927. El. c. 2000 ft.

2972

611. 611. Gutierrezia sarothrae Britt & Rusby.

Very common on sandy flats along the road to Tecate, short distance from point where it joins road to Campo. Aug. 7, 1927. El. 2000

2973

612. Yucca mohavensis Sarg. G-218

G 218

Leaves raised on short trunk a foot or several above the ground. Inflorescence 3--4 ft. long, the capsules oblong, conspicuous. In chaparral along the road about one mile north of Tecate, U. S. along the road to Campo. Aug. 7, 1927. El. 2000

2974

foliolosum Stokes.

613. Eriogonum fasciculatum. var.

Plants growing on steep, rocky southern slopes along the road between Potrero and Campo. The inflorescence noteworthy for the unusually long rays. Aug. 7, 1927. El. c. 2500

2975

614. Monardella lanceolata var. microcephala Gray.

Flowers purple. Growing in moist meadow on the road between Campo and Buckman Springs, north of Campo. Aug. 7, 1927. El. c. 3000 ft.

2976

615. Rhamnus californica. var. tomentella B. & W.

Growing in the chaparral in the flats along the road above the meadows where the preceding was collected but near it. Aug. 7, 1927.

2977

canescens Eastw.(?)

616. Arctostaphylos ~~pungens~~.

G-219.

G 219

Shrubs 6--10 ft. high. With the preceding. Aug. 7, 1927.

2978

617. Adenostoma sparsifolium Torr.

Shrubs about 10 ft. high with simple trunk and much branched but rather slender crown. Flowers white. Near preceding growing on sandy flats. Aug. 7, 1927.

2979

618. Galium andrewsii. Gray.

Growing in granitic sand under chaparral shrubs. Fruit black, juicy. Near preceding. Aug. 7, 1927.

619. Oxytheca trilobata Gray. 2980

With the preceding. Calyx white, segments fringed. Aug. 7, 1927.

620. Lessingia glandulifera. Gray. 2981

Flowers pure yellow. Involucre o long-turbinate. Growing in sandy soil along the road in Pine Valley el. 4000 ft. In the vicinity Pinus ponderosa grows so this valley can be considered a Transition island as the hills around it are completely covered in chaparral. No other Lessingias were seen. Herbage strong smelling. Aug. 7, 1927.

2983

621. Pentstemon ternatus Gray.

Corolla reddish. Large bushy plant growing along the road in the canon just nw. of Pine Valley. Aug. 7, 1927.

2983A.

621A. Cupressus forbesii. Jepson. G-221

G 221

Tree about 20 ft. high growing on steep rocky slope on Sierra Peak at head of Claymine Canon. The size of the cones varies greatly. Generally t the cones are small such as those of no. 226 but become several times larger as in this specimen. The tree from which the present collection was made grows in a group of trees bearing the smaller type of cone. This tree is situated to the north of and somewhat lower than the tree from which no. 226 was collected. Aug. 10, 1927.

2984

622. Clematis ligusticifolia Nutt.

Vines climbing 20 ft. into Populus trichocarpa on the Rancho Santa Ana River bottom; The flowers yellowish-white. Aug. 13, 1927.

2985

623. Hugelia densifolia var. sanctora ~~Milliken~~.

Several branches from woody base, 1--1 1/2 ft. high, the old wood covered by rather thick furrowed bark. Habit and leaves suggest diminutive Tetradymia comosa. Throat of corolla long-exserted, whitish, attenuate downward to tube. Limb spreading, blue with numerous deep blue veins. Stamens exserted. On sandy bar in open place, Santa Ana River bottom, Rancho Santa Ana. Aug. 13, 1927.

2986

624. Hydrocotyle umbellata L.

In moist or wet ground on bank of swampy place in Santa Ana River bottom near the preceding. Aug. 13, 1927.

2987

625. Myriophyllum spicatum L.

Submerged in running water of slough, near the preceding. Aug. 13, 1927.

2988

626. Zannichellia palustris L.

Growing and blooming below running water. With preceding. Aug. 13, 1927.

2989

627. Artemisia vulgaris var. heterophylla Jepson.

Rank herbs from perennial base, 3--4 ft. high or higher; flowers yellowish. Common on river bottom, Rancho Santa Ana. Aug. 13, 1927.

2990

628. Eriogonum cinereum Benth. G-223

Rather broad low shrubs 1--2 ft. high. Calyx whitish or pinkish with maroon midvein. Growing on o en western slope with Artemisia californica just to the south of the summit of Conejo Grade, sw. part of Ventura Co. c. 700 ft. Aug. 15, 1927.

2991

629. Phacelia ramosissima. Slough.

Plants low and spreading, 1/2--1 ft. high, 2--6 ft. across. Corolla bluish. Growing in semi-shade on rocky bank of Gaviota Creek in Gaviota Pass, Santa Barbara Co. Aug. 16, 1927. 150 ft.

2992.

630. Baccharis plummerae Gray.

Perennial herb with many stems from base, 2 ft. high. Flowers yellowish-white, apparently dioecious. Growing in clefts in the rocks at Gaviota Pass, Santa Barbara Co. Aug. 16, 1927.

2993.

631. Zauschneria californica var. villosa Jepson.

Plants with spreading habit. Calyx and corolla scarlet. With the preceding. Aug. 16, 1927.

632. Corethrogyne filaginifolia var. rigida Gray. 2994

Erect or semi-erect plants 1--2 ft. high. Rays light to dark purple, disk yellow. Growing in soil pockets in rocky wall with preceding. Aug. 16, 1927.

633. Amorpha californica Nutt. G-225

Shrubs 6--8 ft. tall. Herbage with resinous smell. Growing in grassland or with shrubs under oaks, Santa Ynez Valley, Santa Barbara Co. Aug. 16, 1927. c. 500 ft.

2995

634. Rhamnus crocea. Nutt. G-226

Shrub 5 ft. high. Fruit red, juicy, acrid with sligh sweetness. Growing in partial shade on grassy hillside under Quercus agrifolia. Santa Ynez Valley near Buellton, Santa Barbara Co. Aug. 16, 1927. c. 500 ft.

2996

635. Lupinus albifrons Benth. G-227

Broad shrub 5--7 ft. high. Corolla bluish-purple. Growing in sandy soil on open valley floor four miles sw. of Orcutt along the highway between Harris and Orcutt, Santa Barbara Co. Aug. 16, 1927. c. 500 ft.

2997

636. Senecio douglasii DC.

Beautiful shrub 5--7 ft. high, with many heads of bright yellow flowers. With the preceding. Aug. 16, 1927.

2998

637. Lessingia glandulifera Gray.

Diffusely branched plants, erect of spreading. Glandular secretion odorous. Flowers yellow with brownish band in throat. Growing in sandy soil along the highway between Harris and Orcutt, 4 miles southwest of the latter. Aug. 16, 1927.

2999 Jepson.

638. Hemizonia corymbosa var. barclayi.

Flowers yellow. Plants growing in sandy soil on level valley floor along highway between Orcutt and Santa Maria, Santa Maria Valley, Santa Barbara Co. Aug. 16, 1927. 250 ft.

3000 Jepson.

639. Isocoma veneta var. vernonioides

Flowers yellow on stems from shrubby base, 3 ft. high. With the preceding.
Aug. 16, 1927.

3001

640. Eriogonum parvifolium Sm. G-228

Plants 1--3 ft. high forming hemispherical mounds. Calyx white, turning pink. Rocky slopes facing ocean, Pismo Beach, San Luis Obispo Co. Aug. 16, 1927.

3002

641. Eriogonum vimineum var. elegans Jepson.

Calyx whitish with reddish mid-veins. Growing on gently sloping, sandy hillside 4 miles south of Templeton just off the main highway between Templeton and Atascadero, San Luis Obispo. Co. Aug. 17, 1927 El. c. 800 ft.

3003

642. Eriogonum gracile Benth.

Calyx yellowish becoming reddish-brown. With the preceding. Aug. 17, 1927.

3003A.

642A. Eriogonum virgatum Benth.

Calyx pink. With the preceding. A
Aug. 17, 1927.

3004

643. Chrysopsis villosa var. echioides Gray.

Flowers yellow. With the preceding.
Aug. 17, 1927.

3005

643A. Lessingia glandulifera Gray.

Flowers yellow with brownish band in throat. Herbage with strong smelling glandular secretion. With the preceding. Aug. 17, 1927.

644. Acer negundo.

3006

644. Acer negundo var. californicum Sarg.

Trees 20 ft. high with spread of 30--40 ft. Trunk 1 1/2 ft. in diameter. Growing in gravelly soil 1 mile south of Bradley in the Salinas River bottom, Monterey Co. Aug. 17, 1927. Ee. 550.

3007

645. Forestiera neo-mexicana Gray. G-231

Rather a straggling-branched shrub 10--15 ft. high growing in semi-shade. Drupe fleshy, with glaucous, purple skin, taste bitter. Shrubs dioecious. Hillside at west end of Salinas River bridge at Bradley, Monterey Co., Aug. 17, 1927. Ee 540.

3008

646. Eriodictyon crassifolium var. nivcum Brand. G-732

Shrub 4--6 ft. high growing on gentle open hillside in Pinus sabiniana and Quercus douglasii belt. On the road to Jolon, 12 miles from Bradley, in Monterey Co. Aug. 17, 1927. Ee c. 1000.

3009

647. Hemizonia lobbii Greene.

Flowers yellow. Growing on steep rocky hillside in Pinus sabiniana and Quercus douglasii belt 6 miles w. of Jolon beyond San Antonio Valley, Santa Lucia Mts., Monterey Co. Aug. 17, 1927. Ee. c. 1000

3010

648. Eriogonum nudum Dougl.

Calyx pale yellowish. With preceding. Aug. 17, 1927.

3011

649. Lessingia glandulifera Gray.

This form without the conspicuously pinnately divided leaves which are found in no. 643A. Flowers yellow with purple band in throat. Santa Lucia Mts., Monterey Co., growing on rocky flat in very dry valley bottom 13 miles sw. of Jolon, on the Nacimento River. Aug. 17, 1927. El. 1400

3012 G-233.

650. Pinus sabiniana. Dougl.

Tree 25 ft. high, trunk about 1 ft. in diameter. Growing on open hillside, moderate slope to south. Two miles off the Jolon-King City road toward Santa Lucia Camp. Aug. 17, 1927. El. 1400.

3013

651. Chrysopsis villosa var. camphorata Jepson.

Flowers yellow. Growing in rocky dry flood-bed of Arroyo Seco River at Santa Lucia Camp, Santa Lucia Mts., Monterey Co., Aug. 18, 1927. El. 2000

3014

652. Boykinia elata Greene.

Petals white. Plants growing in deep shade on moist bank just above water of Arroyo Seco River at Santa Lucia Camp, Santa Lucia Mts., Monterey Co. Aug. 18, 1927.

3015 G-235

653. Ceanothus papillosus T. & G.

Shrub about 10 ft. high. Herbage glandular, with pungent smell. Growing in rocky canon bottom of Arroyo Seco River under Santa Lucia Fir in the canon just above Santa Lucia Camp. Aug. 18, 1927. El. 2200.

3016

654. Madia elegans Don.

Rays yellow, sometimes with brown spot at base. Growing in semi-shade with the preceding. Aug. 18, 1927.

3017 G-234

655. Abies venusta. Koch.

Beautiful, symmetrical conifer with drooping branchlets, the branches slightly up-turned at the end. Needles in shade standing out from branchlet in all directions, in sun and on youngest growth tending to flatten into 2 ranks. Branches clothing the trunk to the base. Trunk 1--1 1/2 ft. in diameter, bark silvery-grey, smooth. Cones found only on branches at slender top. Growing in rocky canon bottom near the water with Quercus kelloggii, Umbellularia californica, Arbutus menziesii, Platanus racemosa, Alnus, Acer macrophyllum, while higher on the caono side are Quercus chrysolepis, Pinus coulteri, Quercus agrifolia. A little lower in the canon less than 1/2 mile away Libocedrus decurrens and Quercus wislizenii were found. The height of the specimen tree was from 85 to 100 ft. With the preceding. Aug. 18, 1927.

3018

656. Hieracium argutum Nutt(?)

Flowers yellow. Growing in partial shade in dry soil under preceding. Aug. 18, 1927.

3020 Japan.

657. Lessingia glandulifera var. pectinata.

Plants erect but widely branching. Flowers yellow, brownish in throat. Growing on rolling sand hills that are covered with Quercus agrifolia about 4 miles east of Monterey on the road to Salinas. Aug. 18, 1927. From type locality. Ee .100.

3021 G-236.

658. Ceanothus thyrsiflorus. Eschs. var. griseus Trel.

Shrub 7 ft. high growing in semi-shade under Pinus radiata. Near the road between Monterey and Carmel. Aug. 18, 1927. Ee. 300

3022 G-237

659. Pinus radiata. Don.

Tree 75 ft. high with dark, rough bark and trunk 3 ft. in diameter. Old trees developp flattened branches and flat tops and are exceedingly picturesque. On the road between Carmel and Monterey. Aug. 18, 1927.

3023 G-238.

660. Lupinus arboreus Sims.

Shrub 5--6 ft. high. Flowers yellow. Growing on the sea-bluffs at the beginning of the 17-mile Drive in Pacific Grove. Aug. 19, 1927. Ee 50 T 00

3024

661. Phacelia malvaefolia Cham.

Rather rank spreading annual with stinging hispid herbage. Corolla campanulate-bowl-shaped, pale brownish-yellow with purple spots in throat back of each stamen, the whole fading brownish. Growing in sandy loam in shade under Cupressus macrocarpa at Cypress Point, Monterey Peninsula. Aug. 19, 1927.

3025

662. Cupressus macrocarpa. Hartw. G-239.

Trees about 100 ft. high when somewhat sheltered but low and rugged on the very coast. Trunk erect in sheltered places, the bark shallowly furrowed, somewhat reticulate, light grey. Trunk 1 1/2--2 ft. in diameter generally or larger 4--6 ft. Specimen from Cypress Drive a short distance back from the sea bluffs and somewhat protected. Aug. 19, 1927.

3026

663. Arctostaphylos tomentosa Lindl. G-240

Shrub 4--6 ft. high. Lower stems covered with shreddy, dark brown bark. Plants stump-sprout after fire. Open hill slope in chaparral west of Monterey in coarse sandy soil. Aug. 19, 1927. El. 300

3027

664. Arctostaphylos ~~pungens H.B.K.(?)~~ Lookeri Don. CBW. 24 March 1931 G-241

Plants 1--5 ft. high. Trunk smooth, red. Does not stump sprout. With the preceding. Aug. 19, 1927.

3028

665. Arceuthobium campylopodum Engelm

Fruit glaucous, fleshy. Plants forming large knot-like distortions on limb and trumk. Growing on Pinus radiata, Huckleberry Hill, Monterey. Aug. 19,1927. El. c. 400

3029

666. Pinus tuberculata. Gord. G-244

Tree 15--50 ft. high. Trunk about 1 ft. in diameter. Growing on rocky, sandy slope above Big Basin between Big Basin and summit along road to Saratoga. Aug. 20, 1927. El. c. 2000

3030 G-245

667. Eriodictyon californicum Greene.

Shrub 3--12 ft. high of slender canes from the base mostly. With the preceding. Aug. 20, 1927.

3031

668. Arctostaphylos andersonii. Gray. G-246

Shrub 8 ft. tall, not sprouting from the stump. With the preceding. Aug. 20, 1927.

3032

669. Sequoia sempervirens. Endl. G-247

Small tree about 50 ft. tall growing between a redwood pocket in a canon and the chaparral. Bark shreddy, fibrous, grey-cinnamon. Soil sandy, rocky. Near the preceding. Aug. 20, 1927.

3033

670. Quercus wislizenii. var. frutescens Engelm (?)

Shrubs about 12 ft. tall growing on south side of Mt. tamalpais on trail above Mill Valley and Miss Eastwood's home. In chaparral of manzanita and ceanothus. Aug. 22, 1927. Alt. c. 500.

671. Torreya californica. Tor. 3034

Several specimens about 12 ft. tall growing on rocky eastern slope near the preceding, surrounded by chaparral. Aug. 22, 1927.

3035

672. Quercus wislizenii. var. frutescens Engelm. G-249 ?

The cup of this plant exceedingly large and with a more scaley, almost coarse-fibrous appearance. Growing in the chaparral near the preceding, not far from the Mt. Tamalpais railroad. Aug. 22, 1927. Alt. c. 700.

673. Castanopsis chrysophylla var. minor Benth.

Shrub 6 ft. high growing in the chaparral on the south side of Mt. Tamalpais in rocky soil near the preceding. Aug. 22, 1927.

3036

674. Lithocarpus densiflora Rehd.

Trees about 50 ft. high on edge of redwood pocket along Mt. Tamalpais railroad just below and to east of West Point. Aug. 22, 1927. Ec. 1700

3037

675. Eriogonum vimineum var. canicum Greene.

Calyx rose or deep pink. Growing in sandy or rocky soil in chaparral along the Rock Spring Trail west of West Point. Aug. 22, 1927. Ec 1800

3038

676. Arctostaphylos glandulosa. Eastw. G-250

Shrub 2--4 ft. high, the stems conspicuously glandular-hairy. With the preceding. Aug. 22, 1927 .

3039

677. Arctostaphylos canescens Eastw.

Broad shrub, 2--3 ft. high and twice as broad. Stems not glandular. With the preceding. Aug. 22, 1927. G-251

3040

678. Cupressus sargentii. Jepson. G-252

Trees about 20 ft. high and 30--40 ft. broad. Growing in rocky soil near serpentine outcrops on Rock Spring Trail, Mt. Tamalpais, 1--2 miles west of West Point. Aug. 22, 1927.

679. Ceanothus jepsonii. Greene. G-253.

Shrub 1--4 ft. high in the chaparral along the Rock Spring Trail Mt. Tamalpais with the preceding. Aug. 22, 1927.

3041

680. Calycanthus occidentalis H. & A. G-261.

Shrub 4--8 ft. high with odorous leaves. Petals reddish-maroon turning brownish. Growing in rocky stream-bed, Sage Canon, Napa Range east of Rutherford, Napa Co. Aug. 23, 1927. Alt. c. 300 ft.

3042

681. Eriogonum dasyanthemum T. & G.

Calyx deep pimk, midvein of segments red. Chiles Valley, Napa Range. Aug. 23, 1927. Alt c. 700

682. Quercus douglasii. H. & A. 3043
Growing on the hills on the north side of Chiles Valley, Napa Range. Aug. 23, 1927.

683. Quercus kelloggii. Newb. 3044

With the preceding.
Aug. 23, 1927.

684. Quercus garryana. Hook.

With the preceding.
Aug. 23, 1927.

3045

685. Quercus durata. Jepson.

Shrub 4--8 ft. high, common in the canon of Pope Valley Creek below Walter's Springs, Napa Range. Aug. 24, 1927.

3046

686. Trichostema laxum Gray.

Corolla purple. In sandy soil of rocky streambed of tributary to Pope Valley Creek below Walter's Springs, Napa Range. Aug. 24, 1927.

3047

687. Brickellia californica T. & G.

Stems from very woody base. Flowers yellowish. Among rocks in bed of Pope Valley Creek between Walter's Springs and Samuel's Springs. The herbage odorous. Aug. 24, 1927.

3048

688. Mentzelia laevicaulis T. & G. 6-265.

Biennial herbs. Calyx creamy-yellow, petals bright yellow. Growing in loose rocky soil on open bank near Pope Valley Creed sw. of Walter's Springs, Napa Range. Aug. 24, 1927.

3049

689. Angelica tomentosa Wats.

Tall herb from perennial base, 4--6 ft. high, Flowers white, in spherical unbellets. In rocky moist strema bottom along the road from Pope Valley to Middletown in Butts Valley, Napa Range. Aug. 24, 1927.

Sargent CBW

3050

690. Cupressus macnabiana. Murr. G-266.

Tree 35 ft. high. Leaves not resinous-dotted. growing in moist stream bottom with preceding. Aug. 24, 1927.

Sargent CBW

3051

691. Cupressus macnabiana Murr. G-267.

Tree 60 ft. high, diameter of trunk about 2 ft. With the preceding. Aug. 24, 1927.

3052

692. Lessingia ramulosa var. adenophora Gray.

Growing on very dry and exposed hillside in hard heavy soil just below a serpentine outcrop. Near the road between Pope Valley and Middletown, 11 miles from Pope Valley and about 8 miles ese. of Middletown. Aug. 24, 1927.

3053

693. Lessingia ramulosa. Gray.

Corollas light purple. The robust habit might be due to the fact that the plants grow on what appears to be a fresh road fill. Soil heavy, clay. On hillside near road between Cloverdale and Boonville, 5 miles se. of Boonville in Anderson Valley, Mendocino Co. Under oak and madrona bordering redwood area. Aug. 25, 1927.

3054

694. Pseudotsuga taxifolia Britt. G-268

Tree 150 ft. tall with diameter of trunk about 4 ft. Bark rough, dark, irregularly fissured. On open hillside in redwood country, 1 1/2 miles se. of Christine P. O. and 4 miles from Wendling, Mendocino Co. Aug. 25, 1927.

3055

695. Arctostaphylos columbiana. Piper.

Shrub 6--10 or 25 ft. tall with trunk about about 1 ft. in diameter. The bark peels clear to the base, thetrunk reddish. Growing on the sandy plains about 3 mi. east of Ft. Bragg and the ocean in dense growth of shrubs and trees.
Aug. 25, 1927.

3056

696. Arctostaphylos nummularia Gray.

Habit varies--on ground underlaid by hard pan the habit is prostrate or slightly ascending; in loamy soil the plants become 7 ft. tall. With the preceding. This specimen not from prostrate plant. Aug. 25, 1927.

3057

697. Vaccinium parvifolium Sm.

Fruit fleshy, waxy in appearance, red or pinkish, acid. Growing 6 ft. tall in thick forest underbrush. With preceding.
Aug. 25, 1927.

3058

698. Rhododendron californicum Hook.

Three--15 ft. tall depending on whether it grows in open place under laid by hard pan or whether it grows in loamy soil of forest. This specimen from latter. With preceding. Aug. 25, 1927.

3059

699. Pinus contorta. Dougl. G-269

Tree 40 ft. tall, trunk 16 in in diameter. Growing between the "pygmy forest" and the

dense jungle. Near the preceding, 3 mi. east of Ft. Bragg, Mendocino Co. Aug. 25, 1927.

3060 G-271

700. Pinus muricata. Don

Tree 50 ft. tall. With preceding. Aug. 25, 1927.
The bark of P. contorta is roughly but thinly fissured, greyish-brown. The bark of P. muricata is rather roughly fissured, brownish-grey. Old cones cling even to the trunk of specimens of P. muricata.

3061 G-270

701. Cupressus pygmaea. Sarg.

Six--100 ft. tall depending on whether growing in locality underlaid by hard pan or not. The diminutive trees bear an abundance of cones. This specimen from near the preceding and about 40 ft. tall. The tall trees are magnificent. One, fully 100 ft. tall, has straight pale gray trunk, 20 ft. to the first limb, the bark evenly and finely fissured, the trunk 3 ft. in diameter. Near the precedingon the Mendocino coastal plain, 3 mi. east of Ft. Bragg. Aug. 25, 1927.
The lumber is very beautiful and is marketed for cedar for chests.

3062

702. Tsuga heterophylla Sarg.

Specimens from a sapling growing in the dense forest near the preceding. Aug. 25, 1927.

3063

703. Ledum glandulosum Nutt.

Shrub 4--8 ft. tall, many stems from the base. In more open place near the preceding. Aug. 25, 1927.

3064

704. Abies grandis. Lindl.

Beautiful tree about 100 ft. tall, trunk 3 ft. in diameter. Bark grey, shallowly checked and furrowed. Branches persistent nearly to the ground. Aug. 25, 1927. Canon of Big River, short distance se. of Mendocino City on road to Ukiah.

3065

705. Lessingia glandulifera. Gray.

Three mi. west of Manteca where highway between Tracy and Manteca crosses the S. P. railroad. Soil sandy. Glandular secretion with usual oilly odor. Aug. 27, 1927. fl. 5 ft

3066

706. Eriogonum virgatum Benth.

Calyx whitish. With the preceding. Aug. 27, 1927.

3067

707, Lessingia glandulifera. Gray.

Merced River Bridge on highway between Delhi and Livingston. In deep sandy soil. Glandular secretion with oilly smell and very bitter taste--like quinine. Aug. 27, 1927. fl. c. ~~200~~ 150.

3068

708. Lessingia glandulifera. Gray.

Fivemi. below Three Rivers along the road in sandy soil. Glandular secretion with oilly odor and bitter taste. Aug. 28, 1927.

3069

709. Lessingia leptoclada. Gray.

Flowers lavender. Growing in sandy soil in grassy places along the road 5 mi. below Three Rivers. This part of the Kaweah Canon is in the Lower part of the Upper Sonoran Zone and is probably as low as this species ever goes. Aug. 28, 1927.

3070

710. Cornus nuttallii Aud. G-276.

Shrubby tree 12--15 ft. high growing in deep shade in gully near the Giant Forest, Sequoia Nat. Park, vicinity of Sunset Rock. Aug. 28, 1927. el. 7000 ft.

3071

711. Pinus monticola. Dougl.

Tree about 50 ft. tall with trunk 2 ft. in diameter. Growing on gentle slope of lake basin but well above water-line, Twin Lakes, Sequoia National Park, near Mt. Silliman. The changes taking place in the appearance of bark in this tree is interesting--the sapling has smooth bark of shining silver, this breaks up to a grey bark with distinct brownish tinge, the ma mature tree has deeply and regularly furrowed bark of bright brownish-red. In a mature tree all of these types can be seen in glancing from the sturdy base to the conical top. Aug. 29, 1927. el. 9800 ft.

3072

712. Phacelia hydrophylloides Torr.

Growing best in beds of decaying pine needles between the granite sandy slope above and the margin of the lake, the location mostly shaded or partiallyso. Flowers faded, some still bluish. With Pinus monticola, Pentstemon confertus, pedicularis semibarbata. With the preceding. Aug. 29, 1927.

3073

713. Phacelia heterophylla Pursh.

Corolla pale, delicate blue, or partially whitish. Growing on moist, forest-covered talus slope between Twin Lakes and Twin Peaks. Aug. 29, 1927. El. 10,000

3074 G-277

714. Pinus monticola. Dougl.

Growing in disintegrating grante on the ridge between Twin Peaks and Mt. Silliman. Bark greyish or somewhat brownish, checked deeply. Tree 30 ft. high, trunk 1--2 ft. in diameter. Aug. 29, 1927. El. 10,200.

3075 G-278

715. Arctostaphylos nevadensis. Gray.

Prostrate shrub growing over granite rocks about 1 mile below Twin Lakes along the trail. Height about 6 in., spread about 3 ft. Aug. 29, 1927. el. 8500

3076 G-279

716. Pinus contorta var. murrayana. Engelm.

Young, pyramidal sapling about 25 ft. tall. Growing in rocky gully above ne. end of Cahoon Meadow along the trail, Sequoia Nat. Park. Aug. 29, 1927. El. 8200

3077

717. Prunus emarginata. Walp.

Shrub 12 ft. tall with silvery, shining bark; on rocky slope forming thicket near preceding. Fruit bitter. Aug. 29, 1927.

3078

718. Phacelia heterophylla Pursh.

Flowers whitish. Growing in sandy soil on edge of amsses of shrubs--Arctostaphylos patula, Castanopsis sempervirens, Prunus emarginata, Ceanothus cordulatus. Along the trail above ne. end of Cahoon Meadow. Aug. 29, 1927.

3079

719. Phacelia ramosissima. Dougl.

Diffuse or suberect stems from very thick roots. Flowers pale bluish. Growing among shrubs near the preceding. Aug. 29, 1927.

3080

720. Abies magnifica. Murr. G-280

Tree about 150 ft. tall, trunk 4 1/2 ft. in diameter, the bark deeply furrowed and dark red. Along the trail above ne. end of Cahoon Meadow with the preceding. Aug. 29, 1927.

3082

721. Phacelia heterophylla Pursh.

In loamy, sandy soil along freah road cut in Giant Forest near Highland Camp. Corolla whitish. Growing in nearly complete shade, soil moist. Evidently blooming the first year. Aug. 30, 1927. el. 7000

3083

722. Sequoia gigantea. Hlec.

Foliage from a sapling, and characteristic of sterile foliage. Branchlets to bear cones become bunched near the tops of tall trees (at least 175 yrs. old according to Judge Fry) and give the mature crown a knobby and bumpy appearance. Giant Forest along road to Three Rivers via Indian Painting Rock. Aug. 30, 1927. el. 6500

3085

723. Phacelia heterophylla var. grisseophylla Jepson.

Flowering stems from a broad leafy nat-like base of many stems from root-crown. Hairs stinging, harsh. Growing on loose soil of road cut and fill at Black Oak Pt., Sequoia Nat. Park. Aug. 30, 1927. el. c. 5500

3086

724. Lessingia leptoclada. Gray.

Flowers lavender. Growing in undisturbed soil in grassland along road at Black Oak Pt. Plants growing on the road-fill are much-branched from base to tip. This form without branches at base is typical. Aug 30, 1927.

3087

725. Libocedrus decurrens. Torr. G-281

Tree 40 ft. high with trunk 1 ft. in diameter. Growing on a shelf on steep canon side at lower edge of the Transition Zone along the road, Sequoia Nat. Park. Aug. 30, 1927.

~~arborescens~~ CRW.
3088

726. Ericameria ~~parishii Hall~~.

Shrub 6 ft. high with several very woody branches at base, 1--2 in. in diameter. Flowers yellow. Upper Sonoran Zone with Quercur douglasii and Aesculus Five miles above entrance to Sequoia Nat. Park. Aug. 30, 1927. Ed. c. 3000.

3089

727. Lessingia glandulifera. Gray.

Glandular secretion oily smelling and with bitter taste. Newhall, Los Angeles Co. Aug. 31, 1927. Ce. 1200.

728. Prunus ilicifolia. Walp. G-286/7.

Shrub 12 ft. high growing in sandy soil along Highland Ave. east of Upland. Collected by B. D. Stark. Sept. 9, 1927.

729. Fraxinus ~~dipetala H. & A.~~ velutina coriacea - CBW. G-287.

Tall shrub or tree 25 ft. high growing on a rocky wash on the south side of Cajon Pass. Collected by B. D. Stark. Sept. 9, 1927.

730. Garrya veatchii Kell. G-288

Shrub 10 ft. high, growing in sandy soil 1/2 mile north of summit of Cajon pass along the old road to Hesperia. Collected by B. D. Stark. Sept. 9, 1927.

731. Arctostaphylos glauca Lindl. G-289.

Shrub 5 ft. high growing in gravelly soil with the preceding. Collected by B. D. Stark. Sept. 9, 1927.

732. Lessingia lemmonii Gray.

With the preceding. Collected by B. D. Stark. Sept. 9, 1927.

732A. Pinus cembroides var. monophylla. Voss. G-290/7.

Low tree 14--25 ft. high growing in rocky soil 1 mile above Cushenberry Springs, San Bernardino Co. Collected by B. D. Stark. Sept. 10,1927.

733. Fremontia californica Torr. G-291

Shrub 12 ft. high growing in rocky soil of rocky canon bottom. With the preceding. Seed. Collected by B. D. Stark. Sept. 10, 1927.

734. Pinus lambertiana. Dougl. G-292

Tree 125 ft. high, diameter of trunk 3 1/2 ft. Bear Valley Dam, south side. Collected by B. D. Stark. Sept. 12, 1927. El. 6600 ft.

735. Pinus coulteri. Don. G-293,

Tree 20--40 ft. high, trunk 10--24 in. in diameter. On City Creek Road 1/2 mile below dam in Bear Valley. Collected by B. D. Stark. Sept. 12, 1927. el. 6500 ft.

736. Abies concolor. Lindl. & Gord. G-295

Tree 130 ft. high, trunk 2 ft. in diameter. City Creek Road 2 1/2 miles below Bear Valley Dam. Growing in chaparral covered creek bottom. Collected by B. D. Stark. Sept. 12, 1927.

736A. Pinus tuberculata. Gord. G-297

Tree 20 ft. high growing in gravelly soil on hot dry south slope on the City Creek Road 1 mile above Barrel Springs. Collected by B. D. Stark. Sept. 12, 1927.

737. Arctostaphylos drupacea Mc Br. (?)

Shrub 4--5 ft. high on the City Creek Road to Big Bear. Collected by B. D. Stark. Sept. 12, 1927. G-298

737A. Pinus monticola. Dougl.

Growing on Ridges leading to Red Mountain, Fresno Co. Collected by E. R. Johnson. Oct. 1, 1927.

738. Isocoma veneta var. vernonioides Jepson. 3105

Common on steep sandy slopes with Artemisia californica, Corethrogyne filaginifolia, Salvia apiana. Flowers yellow. Stems spreading. Just south of house, Botany Garden, Rancho Santa Ana. Sept. 24, 1927.

739. Corethrogyne filaginifolia var. rigida Gray. 3106

Stems erect or spreading. Rays purplish, disk yellow. With the preceding. Sept. 24. 1927.

740. Rhus diversiloba. T. & G.

Low shrub growing on northeastern slope in sandy soil near the preceding. In the river bottom this species becomes very rank and large. Sept. 24, 1927.

741. Eriogonum elongatum Benth. 3107

Long branches of inflorescence seldom erect but generally spreading widely. Color of calyx varying from pale whitish color to bright pink. Near the preceding. Sept. 24, 1927.

3108

742. Eremocarpus setigerus. Benth.

Plants branching from base and forming hemispherical or flattish mounds. The plants of this collection are about 1/4 to 1/3 the size of some of the larger plants nearby. Along road just below water tank, Botany Garden.
Sept. 24, 1927.

743. Erigeron canadensis. L.

Growing in the loose soil along the road at the water tank, Botany Garden.
Sept. 24, 1927.

744. Chrysopsis villosa var. fastigiata Hall. 3109

Plants erect. Flowers yellow. Growing on or near sandstone outcrops, near the preceding. Sept. 24, 1927.

745. Artemisia dracunculus L. 3110

Near the preceding, forming a colony.
Sept. 24, 1927.

746. Gutierrezia sarothrae Britt. & Rusby. 3111

This species seems very common and abundant in many parts of southern California. This material collected for mature achenes. Flowers yellow. With preceding.
Sept. 24, 1927.

3112

747. Heterotheca grandiflora Nutt.

Flowers yellow. Plants growing on rocky outcrop of sandstone on ridge between Botany Garden and Aliso Canon, Rancho Santa Ana. Sept. 24, 1927.

3114

748. Ericameria palmeri Hall.

Herbage very glandular, the excretion with odor of lemon. Flowers yellow. With nos. 744--746. This plant forms a low, spreading bush, the main stems seldom strictly erect. Sept. 24, 1927.

3115

749. Eustoma silenifolium Salisb.

Herbage somewhat hlaucous. Flowers with deep lavender corolla, the base of the segments with two whitish transverse lines. Apex of lobes rounded. Growing in moist sandy soil in Santa Ana River bottom near the ranch houses. Sept. 24, 1927.

3116

750. ~~Erigeron~~ Aster exilis Ell.

Rays pale to lavender-pink, disk yellow. With the preceding. Sept. 24, 1927.

3117

751. Pluchea camphorata DC.

Herbage glandular, odorous. Flowers lavender-rose. Plants growing in moist situation w with the preceding, generally shaded. Sept. 24, 1927.

3118

752. Artemisia dracunculus L.

Forming a low sprawling plant on sandy banks and flats of Santa Ana River bottom near tte preceding. Sept. 24, 1927.

3 120

753. Lycopus americanus Muhl.

Plants growing in shallow water in swampy place on Santa Ana River bottom near ranch houses, Rancho Santa Ana. Sept. 24, 1927.

312

754. Ambrosia psilostachya DC.

Common weed of open pastures in Santa Ana River bottom, Rancho Santa Ana. Sept. 24, 1927.

755. Erigeron linifolia Willd.

Weed of waste places near the ranch houses at Rancho Santa Ana. Sept. 24, 1927.

Gray 7379.

3158

756. Ericameria pinifolia Hall.

Broad-topped shrub about 2 ft. high. Herbage sticky glandular, the glandular secretion with citrous-resinous smell. Flowers yellow. The only specimen growing on the hills of the Botany Garden, Rancho Santa Ana. At the bend in the road just above the water-tank. An outstanding feature of this plamt is the laterally compressed axillary branchlets.
Oct. 22, 1927.

3159

757. Artemisia californica. Less.

Straggling shrubs up to 3 or 4 ft. high growing on the rocky outcrops and steep hills of the Rancho Santa Ana. This specimen from near the preceding. Herbage fragrant. Oct. 22, 1927.

3160

758. Hazardia squarrosa Greene.

Low bushy plants or shrubs 2--3 ft. high with few branches. Involucres slender, bracts imbricate with only the very tips squarrose. Growing on the bluffs at east end of Rancho Santa Ana. On these slopes is the nearest approach to true chaparral on the ranch. This species is not common.
~~Sept. 24~~, 1927.
Oct 22

3161

759. Atriplex canescens James.

This specimen is to be compared with the two following. The three sheets were collected from three different plants growing together in the sandy wash of the arro yo at the east side of Rancho Santa Ana. In habit the plants, staminate and pistillate are thesame, forming much branched rounded shrubs up to 5 ft. tall. Comparison of the fruiting bracts discloses wide variation. Oct. 22, 1927.

3162

760. Atriplex canescens James.

With the preceding, And following.
Oct. 22, 1927.

3163

761. Atriplex canescens James.

With two preceding. The unusual variation in size of fruiting bracts in these 3 sheets is not due to difference in environment so far as can be noticed. Oct. 22, 1927.

3164

762. Franseria acanthocarpa Cov.

In dry sandy soil of sandy bar in Santa Ana River bottom, Rancho Santa Ana just below the ranch houses. Oct. 22, 1927.

3165

763. Artemisia tridentata. Nutt.

Single shrub 2--3 ft. tall growing on dry sandy soil near the preceding. Undoubtedly this plant has grown from seed deposited by the river during high water. Oct. 22, 1927.

3166

764. Baccharis emoryi. Gray.

Shrubs 6--8 ft. tall with few branches from a woody base and these rather strict. plants with pistillate frowers showy. Growing in better drained places on Santa Ana River bottom, common. Near the preceding. Oct. 22, 1927.

765

765. Solidago occidentalis Nutt.

Perennial herbs 5--7 ft. tall growing in low, moist or marshy places. Flowers yellow. Near preceding. Oct. 22, 1927.

3168

766. Quercus dumosa Nutt.

Varying from shrubs to arborescent shrubs and low trees, 6--12 or 15 ft. high. Bark whitish, cracked and roughened rather irregularly. Trunks less than 6 in. in diameter, characteristically about 2--4 in. Leaves variable, from entire to spinescant-toothed. Acorns fairly abundant, especially on branches exposed to sun. This oak forms an interesting pygmy forest on the south wall of the west fork of Aliso Canon, Rancho Santa Ana. The individuals are fairly close together so that even with their somewhat narrow crowns they form a close cover overhead. The individuals are gnarled and knotted; they grow tallest in company and are dwarfed to shrubby habit around opens. Oct. 23, 1927.

3169 Jepson.

767. Urtica gracilis var. holosericea

Growing along stream in west branch of Aliso Canon. Under favorable conditions in main growing season becoming 8 ft. tall. Oct. 23, 1927.

3170

768. Bidens levis B.S.P.

Succulent herb growing in wet ground or shallow water. Rays bright yellow. Corolla of disk flowers yellow, the stamen tube black-purplish. Santa Ana River bottom just below ranch houses. Oct. 23, 1927.

3171

769. Baccharis viminea. DC.

Rather strict shrubs 5--8 ft. tall, common on the river bottom near the preceding.

The whitish flower color of both staminate and pistillate plants is very pleasing. Oct. 23, 1927.

3172

770. Ericameria pinifolia Hall.

Same as no. 756, but more robust shrub about 4 ft. tall. Growing in dry canon bottom along road to Aliso Canon, in canon opening down between orchards no. 2 and 3. Oct. 23, 1927. Rancho Santa Ana.

3173

771. Limonium commune var. californica Greene.

Growing in the salt marshes between the Bryant Ranch and East Long Beach. Oct. 29, 1927.

3174

772. Verbena urticifolia L.

Fruiting plants growing in the salty peat bogs at the part of the Bryant Ranch just to east of Alamitos Bay. Oct. 29, 1927.

3175

773. Ambrosia psilostachya DC.

From robust plants about 3 ft. tall growing with the preceding. Oct. 29, 1927.

3176

774. Solidago confinis Gray.

Tall plants, 5 ft. high, from rootstocks. With the preceding. Flowers with rays, yellow. Oct. 29, 1927.

3177

775. ~~Erigeron~~ Aster exilis Ell.

Tall plants, 5--6 ft. tall at most, with much-branched top and lower part of stem simple. Rays pale pink. With the preceding. Oct. 29, 1927.

3178

776. Epilobium californicum var. holosericeum Japan.

Flowers whitish or with pink to rose tint. With preceding. Oct. 29, 1927.

3179

777. Solidago occidentalis Nutt.

Plants from rootstocks, up to 6 or 7 ft. tall. Much-branched above. Flowers yellow. With preceding. Oct. 29, 1927.

3180

778. Polygonum acre H.B.K.

Rank plants, apparently annuals. Stem spotted with red, the nodes much enlarged. Flowers greenish. With the preceding. Oct. 29, 1927.

3181

779. Aster chilensis Nees.

Stems about 5 ft. long, not strictly erect. Heads in many flowered, showy clusters. Rays lavender, pale whitish to deep bluish. Disk yellow. With preceding. Oct. 29, 1927.

3182

780. Pluchea camphorata DC.

Plants apparently from a biennial base. Herbage fragrant. Heads deep rose-pink. With the preceding. Oct. 29, 1927.

3183

781. Gnaphalium chilense Spreng.

From robust plants 3 ft. tall growing with preceding. Oct. 29, 1927.

3184

782. Atriplex hastata L.

Apparently annual. Forming rank, thicket-like growth 3--5 ft. high. Fruiting bracts bright purple-red. With preceding. Oct. 29, 1927.

3185

783. Atriplex patula L.

Annual(?). Straggly plants about 3 ft. tall. Fruiting bracts greenish with shining, dew-like, epidermal cells. With preceding. Oct. 29, 1927.

3186

784. Artemisia biennis Willd.

Annual or biennial plant 2 1/2 ft. tall, growing with the preceding. Herbage with greasy-resinous odor, with preceding. Oct. 29, 1927.

3187 Japan.

785. Isocoma venela var. vernonioides

Perennial suffrutescent plant 2 ft. tall. Flowers yellow. With preceding. Oct. 29, 1927.

786. Cichorium intybus L.

Plant 3--4 ft. tall with bright blue flower. With preceding. Oct. 29, 1927.

787. Echinochloa crus-galli.

Growing along the road near Cypress Station. Apparently an escape. Oct. 29, 1927.

3185 ft.

788. Salicornia ambigua Michx.

Forming dense matted growths with stems more or less spreading. With nos. 772 to 782 at the Bryant Ranch just to the east of Alamitos Bay. Oct. 29, 1927.

789. Quercus dumosa Nutt.

Shrubs growing on a steep mountain side, 6--8 ft. tall. Acorns about 1 1/4 in long. Collected by B. D. Stark on City Creek Road, San Bernardino Mts., el. 3000 ft. Oct. 23, 1927.

790. Quercus dumosa Nutt.

With the preceding. Coll. by B. D. Stark Oct. 23, 1927.

There is no #791.

792. Quercus engelmannii Greene.

Collected by B. D. Stark near Dulzura, San Diego Co. Tree 35 ft. high. Nov. 1, 1927. El. 1500ft.

793. Quercus dumosa Nutt.

Coll. by B. D. Stark 3 miles south of Dulzura, San Diego Co. Shrub 10 ft. tall. El. 1600 ft. Nov. 1, 1927.

794. Quercus dumosa Nutt.

Coll. by B. D. Stark with the preceding.
Shrub 14 ft. tall. Nov. 1, 1927.

795. Quercus dumosa Nutt.

Coll. by B. D. Stark in canon between El Nido
andDulzura, San Diego Co. Shrub 6--8 ft. tall.
El. 2000 ft. Nov. 1, 1927.

796. Quercus dumosa Nutt.

Coll. by B. D. Stark with the preceding.
Shrub 12 ft. tall. Nov. 1, 1927,

797. Quercus dumosa.

Coll. by B. D. Stark with the preceding.
Nov. 1, 1927. Shrub 4 ft. tall.

798. Quercuskelloggii Newb.

Coll. by B. D. Stark between Ryan's and Cuyamaca
Lake at an el. of 5000ft. Tree 25 to 40 ft. tall.
Nov. 2, 1927,

799. Quercus chrysolepis Liebm.

Coll. by B. D. Stark 5 mi. south of Julian,
San Diego Co. el. 5000 ft. Tree 20 ft. tall.
Nov. 2, 1927.

G-310.

800. Cupressus forbesii Jepson.

G310

Coll. by B. D. Stark in canon between El Nido and Dulzura at an altitude of 2000 ft. Tree 40 ft. tall with spread of 30 ft. In deep rocky canon. Nov. 1, 1927.

801. Brickellia californica T. & G.

Shrub 3--4 ft. tall growing along road at the west side of Rancho Santa Ana at Horseshoe Bend. Nov. 5, 1927.

N

802. Gutierrezia ~~californica Bag.~~ sarothrae Britt & Rusby.

Suffrutescent plant growing on sandy bar in the river bottom of the Rancho Santa Ana near the Walnut grove. Nov. 6, 1927.

Field Notes —

Rancho Santa Ana Herbarium.

1928

All collections
made by J. T. Howell
unless otherwise stated.

803. Capsella bursa-pastoris Moench.

In moist shady situation in Orchard #3, Rancho Santa Ana. Jan. 15, 1928.

804. Urtica urens L.

With the preceding.
Jan. 15, 1928.

805. Brassica campestris L.

Petals bright yellow. Growing with the preceding. Jan. 15, 1928.

806. Bidens pilosa L.

Flowers orange-yellow. Near preceding.
Jan. 15, 1928.

807. Ceanothus macrocarpus Nutt.

Flowers white. Growing on the rocky floor of Claymine Canon nearly west of Sierra Peak, Santa Ana Mts.
Feb. 6, 1928.

808. Ribes speciosum Pursh.

Entire flower red. The leaves dark green and shining somewhat above. Near the preceding, but in a more shaded location.
Feb. 6, 1928.

809. Paeonia brownii Dougl.

Petals black-red with the margins fading to red and orange. In sandy and gravelly soil in central part of Claymine Canon, generally growing about the bases of shrubby bushes. Feb. 6, 1928.

810. Polypodium vulgare var. intermedium Ser.

Growing on steep northern slope near the house in the Botany Garden, Rancho Santa Ana. Feb. 7, 1928.

811. Gymnogramme triangularis Kaulf.

With the preceding.
Feb. 7, 1928.

812. Brodiaea capitata Benth.

Flowers lavender-blue. Growing in sandy soil on somewhat open southwest slope near the preceding.
Feb. 7, 1928.

813. Lepidium nitidum Nutt.

In packed, rather hard soil along the road near the house, Rancho Santa Ana Botany Garden. Feb. 7, 1928.

814. Lupinus succulentus Dougl.

Flowers blue, the banner becoming purplish. In grassy open near the preceding. Feb. 7, 1928.

815. Astragalus leucopsis T. & G.

Flowers yellowish- white. Growing on rather steep gravelly bank, southern slope, Botany Garden, Rancho Santa Ana. Feb. 7, 1928.

816. Viola pedunculata T. & G.

On grassy flat to south of the house, Botany Garden, Rancho Santa Ana, Feb. 7, 1928.

817. Aristida bromoides H.B.K. (A. adscensionis L.)

Dry sandy southern situation near the preceding. Feb. 7, 1928.

818. Plantago erecta Morris.

With the preceding .
Feb. 7, 1928.

819. Sisymbrium altissimum L. (?)

Flowers yellow. Common with other weeds in Orchard #1. Feb. 7, 1928. Rancho Santa Ana.

820. Lomatium utriculatum C. & R.

Flowers yellow. On slope just to the south of the house, Botany Garden, from the same locality where no. 22 was collected in fruit on June 3, 1927. Feb. 7, 1928.

821. Stellaria media Cyr.

Petals white. Orchard # 1. June 3, 1928. Rancho Santa Ana.

822. Matricaria suaveolens Buch.

In beaten ground near the ranch houses, Rancho Santa Ana. Feb. 7, 1928.

823. Medicago hispida Gaertn.

With the preceding.
Feb. 7, 1928.

824. Erodium moschatum L'Her.

With the preceding.
Feb. 7, 1928.

825. Sonchus oleraceus L.

With the preceding.
Feb. 7, 1928.

826. Tillaea erecta H. & A.

Entire plants tending to become reddish. On sandy flat in the river bottom, Rancho Santa Ana. Feb. 7, 1928.

827. Sisymbrium pinnatum Greene.

Growing in deep, almost pure sand near the preceding. Feb. 7, 1928.

828. Phoradendron flavescens var. macrophyllum Engelm.

Parasitic on species of Salix in the river bottom near the preceding. Not common. Feb. 7, 1928.

829. Senecio vulgaris L.

Flowers yellow. Among other weeds in Orchard no. 1. Feb. 7, 1928. Rancho Santa Ana.

830.

Near the ranch houses, Rancho Santa Ana. Feb. 7, 1928.

831. Ranunculus californicus Benth.

On northern sloping hillside, lower part of Aliso Canon, Rancho Santa Ana. Feb. 25, 1928.

832. Uropappus lindleyi Nutt.

Buds not nodding. Along the railroad in clay soil, near the ranch houses. Feb. 25, 1928. Rancho Santa Ana.

833. Amsinckia douglasiana DC.

In hard clay soil along the railroad near Bee Canon. Feb. 25, 1928. Rancho Santa Ana.

834. Silene gallica L.

With the preceding. Feb. 25, 1928.

835. Linaria canadensis Dum.

Flowers purple. With the preceding. Feb. 25, 1928.

836. Gilia multicaulis Benth.

Corolla pale blue. With the preceding. Feb. 25, 1928.

837. Cryptantha flaccida Greene (?)

Corollas white, minute. With the preceding. Feb. 25, 1928.

838. Rumex crispus L.

With the preceding. Feb. 25, 1928.

839. Lupinus truncatus Nutt.

Corolla bluish, the center of the banner white. In loose soil on fill along the railroad near the preceding. Feb. 25, 1928.

840. Chenopodium californicum Wats.

Near the preceding.
Feb. 25, 1928.

841. Calandrinia caulescens H.B.K.

Along the railroad between Bee Canon and Nolina Canon. Feb. 25, 1928.
Rancho Santa Ana.

842. Lotus strigosus Greene.

Corolla orange-yellow, the back of the banner brownish. With the preceding.
Feb. 25, 1928.

843. Lupinus sparsiflorus Benth.

On a grassy flat near Nolina Canon.
Feb. 25, 1928.

844. Layia platyglossa Gray.

Tips of the ray corollas pale yellow or cream-color. Grassy hillside at mouth of Nolina Canon.
Feb. 25, 1928.

845. Cryptantha intermedia Greene.

Calyx lobes with stiff conspicuous bristles. With the preceding.
Feb. 25, 1928.

846. Cryptantha intermedia Greene (?)

With the preceding.
Feb. 25, 1928.

847. Lupinus hirsutissimus Benth.

Herbage with stinging hairs. Corolla reddish-purple. With the preceding. Feb. 25, 1928.

848. Castilleja foliolosa H. & A.

On rocky ridge at entrance of Nolina Canon. Feb. 25, 1298.

849. Senecio californicus D. C.

Flowers all yellow. With the preceding. Feb. 25, 1928.

850. Baeria aristata Cov.

Flowers yellow. Near the preceding, Nolina Canon. Feb. 25, 1928.

851. Silene antirrhina L.

Along the railroad between Nolina Canon and Bee Canon in clay soil. Feb. 25, 1928.

852. Lupinus bicolor var. microphyllus C. P. Sm.

Along the railroad on the embankment near the mouth of Bee Canon. Feb. 25, 1928.

853. Bowlesia lobata R. & P.

In very shady situation in the deep arroyo west of the house in the Botany Garden, Rancho Santa Ana. Feb. 26, 1928.

854. Rhus integrifolia B. & W.

Corolla shell-pink. With the preceding. Feb. 26, 1928.

855. Lamarckia aurea Moench.

On open hills just north of the Botany Garden. Feb. 26, 1928.

856. Aristida bromoides H. B. K. (A. adscensionis L.)

On exposed, southern slope in canon north of house in the Botany Garden. Feb. 26, 1928.

857. Bromus rubens L.

With the preceding. Feb. 26, 1928.

858. Platanus racemosa Nutt.

In the Santa Ana River bottom near the ranch houses, Rancho Santa Ana. Feb. 26, 1928.

859. Lepidium lasiocarpum Nutt.

Flowers with small inconspicuous petals. Silicle ciliate-margined. Sandy flat, river bottom near the preceding. Feb. 26, 1928.

860. Populus fremontii Wats.

In the river bottom near the preceding. Feb. 26, 1928.

861. Pectocarya penicillata A.DC.

Dryish, sandy flat near the preceding. Feb. 26, 1928.

862. Cotula australis Hook. f.

Near the ranch houses, Rancho Santa Ana. Feb. 26, 1928.

863. Calochortus catalinae Wats.

On grassy hillside in the Botany Garden Rancho Santa Ana just below the tank. Mar. 17, 1928.

864. Pentachaeta aurea Nutt.

Rays creamy white. On the flat just to the south of the house, Botany Garden. Mar. 17, 1928.

865. Bromus hordeaceus L.

In clay soil between the house and the tank in the Botany Garden. Mar. 17, 1928.

866. Microseris platycarpha var. parishii Hall.

Heads nodding in bud. With the preceding. Mar. 17, 1928.

867. Leropappus lindleyi Nutt.

With the preceding. Mar. 17, 1928.

868. Plantago erecta Morris.

With the preceding. Mar. 17, 1928.

869. Hordeum murinum L.

With the preceding. Mar. 17, 1928.

870. Malva parviflora L.

With the preceding. Mar. 17, 1928.

871. Orthocarpus purpurascens Benth.

In sandy soil above the tank, Botany Garden. Mar. 17, 1928.

872. Astragalus didymocarpus H. & A.

Growing in clay soil near the road at the northern boundary of the Botany Garden. Mar. 17, 1928.

873. Trifolium fucatum Lindl.

Along the road just north of the garden. Mar. 17, 1928.

874. Sanicula bipinnatifida var. flava Jepson (?)

Hillsides north of the Botany Garden along the Bee Cañon road. Mar. 17, 1928.

875. Thysanocarpus laciniatus Nutt.

In partially shaded location on the steep northward sloping hillside in the cañon north-west of the house in the Botany Garden. Mar. 17, 1928.

876. Nemophila aurita Lindl.

With the preceding. Mar. 17, 1928.

877.

With the preceding. Mar. 17, 1928.

878. Lupinus parviflorus Benth.

With the preceding.
Mar. 17, 1928.

879.

Growing on the dry sandy slope south of the house, Botany Garden.
Mar. 17, 1928.

880. Melica imperfecta Trin.

With the preceding.
Mar. 17, 1928.

881. Nemophila menziesii H.& A.

Limb of corolla pale blue. Shady slope to the north. Aliso Canon.
Mar. 18, 1928.

882. Lathyrus strictus Nutt.

With the preceding.
Mar. 18, 1928.

883. Lithophragma heterophylla T. & G.

With the preceding.
Mar. 18, 1928.

884. Montia perfoliata Howell.

With the preceding.
Mar. 18, 1928.

885. Stellaria nitens Nutt.

Growing in an open grassy place in Aliso Canon, near the preceding. Mar. 18, 1928.

886. Phlox gracilis Greene.

With the preceding. Mar. 18, 1928.

887. Sanicula bipinnata H. & A.

With the preceding. Mar. 18, 1928.

888. Ribes speciosum Pursh.

Near the preceding, shaded by an oak. Mar. 18, 1928.

889. Nemophila menziesii H. & A.

Contrasted with no. 881 which was collected in Aliso Canon, the present specimen has a very deep blue limb. Growing in sandy soil on the northern slope of the ridge east of the house, Botany Garden. Mar. 18, 1928.

890. Festuca myuros ~~bromoides~~ L. (?)

With the preceding. Mar. 18, 1928.

891. Salvia columbariae Benth.

On dry bank of road-cut just above the reservoir, Botany Garden. Mar. 18, 1928.

892. Phacelia distans Benth.

Growing on a fill along the railroad at Gypsum Station. Mar. 18, 1928. Rancho Santa Ana.

893. Loeflingia squarrosa Nutt.

Growing in dryish, sandy soil in the river bottom near the Ranch houses. Mar. 18, 1928.

894. Cerastium viscosum L. (?)

With the preceding. (Petals none.) Mar. 18, 1928.

895. Calochortus splendens Dougl.

Growing in rocky, clay soil inthe lower part of Bee Canon. Apr. 7, 1928. Rancho Santa Ana.

896. Oenothera micrantha Hornem.

Near the preceding, in Bee Canon. Apr. 7, 1928.

897. Cryptantha flaccida Greene.

With the preceding. Apr. 7, 1928.

898. Oenothera bistorta Nutt.

In dry sandy soil in the river bottom near the ranch houses. Apr. 7, 1928. Rancho Santa Ana.

899. Lotus strigosus Greene.

With the preceding.
Apr. 7, 1928.

900. Oenothera contorta Dougl.

With the preceding.
Apr. 7, 1928.

901. Filago californica Nutt.

With the preceding.
Apr. 7, 1928.

902. Oenothera micrantha Hornem.

With the preceding.
Apr. 7, 1928.

903. Sonchus asper L.

In the river bottom near the preceding but in shady situation and moist soil.
Apr. 7, 1928.

904. Carex praegracilis W. Boott.

With the preceding.
Apr. 7, 1928.

905. Linanthus parviflorus Greene.

In sandy soil in a partially shaded place on the rocky slopes south of the house in the Botany Garden.
Apr. 7, 1928.

906. Phacelia minor Thell.

In gravelly or loose loam at the upper side of orchard no. 2. Apr. 7, 1928.
Rancho Santa Ana.

907. Sanicula menziesii H. & A.

Partially shaded northern slope,
Aliso Canon. Apr. 14, 1928.

908. Juglans californica Wats.

Aliso Canon, along the stream in the west fork. Apr. 7, 1928.
Rancho Santa Ana.

909. Symphoricarpos mollis Nutt.

On shaded northern slope near the the preceding. Apr. 14, 1928.

910. Stachys bullata Benth.

With the preceding.
Apr. 14, 1928.

911. Galium aparine L.

With the preceding in shade, Aliso Canon. Apr. 14, 1928.

912. Phoradendron flavescens var. macrophyllum Engelm.

Parasitic on Juglans californica. Fruit waxy-white. Aliso Canon. Apr. 14, 1928.

913. Plectritis ciliosa Jepson.

In semi-shade on northern slope in Aliso Canon. Apr. 14, 1928.

914. Salvia spathacea Greene.

Growing rather deep shade near the preceding. Apr. 14, 1928.

915. Juncus bufonius L.

In wet sandy soil in the river bottom near the ranch houses. Apr. 14, 1928.
Rancho Santa Ana.

916. Mimulus guttatus DC.

With the preceding.
Apr. 14, 1928.

917. Stylocline gnaphaloides Nutt. (?)

In dry, sandy soil on the top of the ridge north of orchard no. 4 at the east side of the ranch. Apr. 15, 1928.

918. Leptodactylon californicum H.+A.

Near the preceding but below the summit of the ridge on the eastern slope. Apr. 15, 1928. no. of orchard no. 4. Rancho Santa Ana.

919. Adenostoma fasciculatum H.+A.

On the ridge above the "Bluffs" at the eastern boundary of the ranch. Apr. 15, 1928. Rancho Santa Ana.

920. Helianthemum scoparium var. vulgare Jepson.

With the preceding. Apr. 15, 1928.

921. Collinsia bicolor Benth.

On partially shaded , northern slope north of the house in the Botany Garden. Apr.15, 1928.

922. Trifolium tridentatum var. aciculare McDer.

With the preceding. Apr. 15, 1928.

923. Euphorbia dictyosperma T.+M.

With the preceding. Apr. 15, 1928.

924. Cheilanthes covillei Max.

Rock Spring, San Bernardino Mts. bordering the Mojave Desert south of Victorville.
Apr. 28, 1928.
Collected by E. R. Johnson.

925. Yucca whipplei Tor.

With the preceding.
Apr. 28, 1928.
Collected by E. R. Johnson .

926. Purshia glandulosa Curran.

With the preceding.
Apr. 28, 1928.
Collected by E. R. Johnson.

927. Eriophyllum confertiflorum Gray.

With the preceding.
Apr. 28, 1928.
Collected by E. R. Johnson.

928. Layia glandulosa H. & A.

With the preceding.
Apr. 28, 1928.
Collected by E. R. Johnson.

929. Diplacus longiflorus Nutt.

With the preceding.
Apr. 28, 1928.
Collected by E. R. Johnson.

930. Allium fimbriatum Wats.

Mojave River at the mouth of Deep Creek, desert slopes of the San Bernardino Mts. Apr. 29, 1928. Collected by E. R.Johnson.

931. Amsonia brevifolia Gray.

With the preceding.
Apr. 29, 1928.
Collected by E. R. Johnson.

932. Lepidium fremontii Wats.

Near Box S Ranch, Mojave Desert.
Apr. 29, 1928.
Collected by. E. R. Johnson.

933. Stanleya pinnata Britt.

With the preceding.
Apr. 29, 1928.
Collected by E. R. Johnson .

934. Astragalus leptiginosus Dougl.

With the preceding.
Apr. 29, 1928.
Collected by E. R. Johnson .

935. Sphaeralcea ambigua Gray.

Bonadiman Ranch about 12 miles southeast of Victorville, Mojave Desert.
Apr. 29, 1928. Collected by.E. R. Johnson.

936. Tetradymia spinosa H.&A.

Near Hesperia, Mojave Desert.
Apr. 29, 1928.
Collected by E. R. Johnson.

937.. Delphinium parishii Gray.

Bear Valley Cut-off north of Hesperia,
Apr. 30, 1928.
Collected by E. R. Johnson.

938. Dysodia cooperi Gray.

Stoddard's Well, on the old road between
Victorville and Barstow, Mojave Desert.
May 8, 1928.
Collected by E. R. Johnson.

939. Coleogyne ramosissima Torr.

Garlic Springs, about 35 to 40 miles
norht-east of Barstow , Mojave Desert.
May 9, 1928.
Collected by E. R. Johnson.

940. Thamnosma montana Torr.& Frem.

With the preceding.
May 9, 1928. Collected by E. R. Johnson.

941. Prosopis juliflora var.
glandulosa Ckll.

With the preceding.
May 9, 1928. Collected by E. R. Johnson.

942. Krameria parvifolia Benth.

Garlic Spring, about 35 to 40 miles northeast of Barstow, Mojave Desert. May 9, 1928; collected by E. R. Johnson.

943. Boerhaavia annulata Cov.

South side of Salisbury Pass, southern part of the Black Mts., east of the south end of Death Valley. May 9, 1928. Collected by E. R. Johnson.

944. Cassia armata Wats.

Salisbury Pass near the preceding. May 9, 1928. E. R. Johnson, collector.

945. Senecio douglasii var. monoensis Jepson.

With the preceding. May 9, 1928. Collected by E. R. Johnson.

946. Oenothera alyssoides var. decorticans Jepson.

With the preceding. May 9, 1928. Collected by E. R. Johnson.

947. Chorizanthe brevicornu Torr.

Shoshone, Inyo County, east of the south end of Death Valley. May 10, 1928. Collected by E. R. Johnson.

948. Phacelia calthifolia Brand.

Sandy wash with the preceding.
May 10, 1928. Collected by E. R. Johnson.

949. Oxystylis lutea Torr. & Frem.

With the preceding.
May 10, 1928. Collected by E. R. Johnson.

950. Phacelia crenulata Torr.

With the preceding.
May 10, 1928. Collected by E. R. Johnson.

951. Parosela californica Vail.

Slope east of Cave Spring, north-east of
Barstow in northern Mojave Desert.
May 10, 1928. Collected by E. R. Johnson.

952. Castilleja angustifolia G. Don.

With the preceding.
May 10, 1928. Collected by E. R. Johnson.

953. Eucnide urens Parry.

Foot of the grade below Cave Springs,
near the preceding. May 10, 1928.
Collected by E. R. Johnson.

954. Parosela fremontii var. saundersii MacBr.

Junction of the Cave Springs Road and the Randsburg Road northward from Cave Springs. May 10, 1928.
Collected by E. R. Johnson.

955. Oxytheca perfoliata T. & G.

Resting Spring, south of Shoshone, Inyo County. May 10, 1928.
Collected by E. R. Johnson.

956. Psilostrophe cooperi Greene.

Cima, on the Union Pacific Railroad in eastern Mojave Desert. May 12, 1928.
Collected by E. R. Johnson.

957. Baileya multiradiata Harv. & Gray.

With the preceding.
May 12, 1928. E. R. Johnson collector.

958. Lencelene ericoides Greene.

With the preceding.
May 12, 1928. Collected by E. R. Johnson.

959. Sphaeralcea ambigua Gray.

With the preceding.
May 12, 1928. Collected by E. R. Johnson.

960. Erigeron concinnus var. eremicus Jepson.

With the preceding. May 12, 1928.
Collected by E. R. Johnson.

961. Mirabilis froebellii Greene.

Fifteen miles south of Cima on road to Fenner. May 12, 1928.
Collected by E. R. Johnson.

962. Verbena bipinnatifida Nutt.

With the preceding.
May 12, 1928. Collected by E. R. Johnson.

963. Fallugia paradoxa Endl.

South of Moore's Ranch on the road to Fenner south of Cima. May 12, 1928.
Collected by E. R. Johnson.

964. Acacia greggii Gray.

Amboy, on the Santa Fe Railroad between Barstow and Needles, Mojave Desert.
May 12, 1928. Collected by E. R. Johnson.

965. Phacelia californica Cham.
var.
Rancho Santa Ana, on the hills between the Botany Garden and Aliso Canon; in a rocky situation on an otherwise grassy hillside under oaks. J. T. Howell.
May 12, 1928.

966. Delphinium decorum F. & M.

In the Botany Garden in the canon north of the house on a steep northern slope.
May 12, 1928. J. T. Howell.

967. Cirsium californicum Gray.

With the preceding. J. T. Howell.
May 12, 1928.

968. Cycloloma atriplicifolium Coult.

Growing in deep, almost pure sand in the river bottom near the ranch houses, Rancho Santa Ana. May 13, 1928. J. T. Howell.

969. Ceanothus crassifolius Torr.

Cajon Pass highway south of the summit of the pass. Collected by E. R. Johnson and B. D. Stark.
May 19, 1928.

970. Delphinium parryi Gray.

Devil's Canon, San Bernardino Mts., short distance east of Cajon Pass. May 19, 1928. Collected by E. R. Johnson and B. D. Stark.

971. Muilla serotina Greene.

With the preceding.
May 19, 1928. Collected by E. R. Johnson and B. D. Stark.

972. Mentzelia laevicaulis T. & G.

Jackrabbit Pass, 6 miles west of Beaumont. June 8, 1928. Collected by E. R. Johnson.

973. Parosela spinosa Heller.

Along the highway south of Mecca on the west side of the Salton Sea, Colorado Desert. June 8, 1928. Collected by E. R. Johnson.

974. Parosela emoryi Hel.

With the preceding.
June 8, 1928. Collected by E. R. Johnson.

975. Parosela emoryi Hel.

With the preceding.
June 8, 1928. Collected by E. R. Johnson.

976. Cercidium torreyanum Sarg.

With the preceding.
June 8, 1928. Collected by E. R. Johnson.

977. Pluchea sericea Cov.

With the preceding.
June 8, 1928. Collected by E. R. Johnson.

978. Acacia greggii Gray.

Kane Spring, Colorado Desert, west of the south end of Salton Sea. June 8, 1928.
Collected by E. R. Johnson.

979. Prosopis juliflora var. glandulosa Ckll.

Seven miles north-west of the town of Imperial, Imperial Valley. June 9, 1928.
Collected by E. R. Johnson.

980. Chorizanthe fimbriata var. laciniata Jepson.

Mountain Spring Grade between El Centro and Jacumba. June 10, 1928.
Collected by E. R. Johnson.

981. Nolina bigelovii Wats.

With the preceding.
June 10, 1928. E. R. Johnson, collector.

982. Agave deserti Engelm.

With the preceding.
June 10, 1928. E. R. Johnson, collector.

983. Calochortus weedii Wood.

Ten miles west of Jacumba, southern
San Diego County. June 10, 1928.
E. R. Johnson collector.

984. Lathyrus splendens Kell.

Between Jacumba and Pine Valley.
June 10, 1928. E. R. Johnson, collector.

985. Swertia parryi Ktze.

Near Pine Valley, San Diego County.
June 10, 1928. E. R. Johnson, collector.

986. Calochortus splendens Dougl.

Pine Valley, San Diego County.
June 10, 1928. E. R. Johnson, collector.

987. Eriogonum fasciculatum var.
foliolosum Stokes.

Alpine, San Diego County, between Pine
Valley and El Cajon. June 10, 1928.
E. R. Johnson, collector.

988. Pentstemon heterophyllus Lindl.

Mountains east of San Diego, probably about 30 miles. E. R. Johnson. June 11, 1928.

989. Chrysopsis villosa var. echioides Gray.

Near the National Monument, south-west corner of the U. S. June 11, 1928. Collected by E. R. Johnson.

990. Isomeris arborea Nutt. globosa Cov.

With the preceding.
June 11, 1928. E. R. Johnson, collector.

991. Wyethia ovata T. & G.

Fifteen miles south of Murietta Hot Springs, Riverside County. June 24, 1928. Collected by B. D. Stark.

992. Euphorbia misera Benth.

Growing on the ocean bluffs between Laguna Beach and Capistrano Beach. Shrubby, about 2 1/2 ft. high. June 24, 1928.

993. Lupinus ~~longiflorus Abrams~~ longifolius (Watts) Abrams. G-387.

Shrubby plant about 4 ft. high. Corolla purplish-blue. Growing in gravelly soil in hilly country, 2 1/2 miles east of the coast on Beverley Boulevard near Santa Monica, el. 250 ft. Collected by J. T. Howell.
June 29, 1928.

994. Artemisia dracunculus L.

Perennial herb 6 1/2 ft. high. With the preceding. June 29, 1928; J. T. Howell.

995. Malacothrix altissima Greene.

Plants 6 ft. high. Ligules white, rose beneath. With the preceding. J. T. Howell.
June 29, 1928.

996. Yucca whipplei Torr.

Growing in gravelly soil on an open hillside on the Seminole Hot Springs Road, Santa Monica Mountains. Stalk of inflorescence up to 14 ft. high. Perianth creamy-white. El. c. 1500 ft. June 29, 1928; J. T. Howell.

997. Phacelia viscida Torr.

Annual herb to 2 1/2 ft. high. Limb of corolla lavender-blue, center yellowish. On a road fill near the preceding. G-388.
June 29, 1928; J. T. Howell.

998. Erigeron foliosus Nutt.

Growing on road fill with the preceding.
Rays light purple. June 29, 1928;
J. T. Howell.

999. Phacelia grandiflora Gray.

G-389.

Rank annual up to 4 or 5 ft. high.
Corolla mottled light blue and whitish.
On road fill near the preceding.
June 29, 1928. J. T. Howell.

1000. Phacelia parryi Torr.

Annual herb 2 1/2 ft. high. Corolla purple
with yellow spots at the base of the lobes.
With the preceding. June 29, 1928;
J. T. Howell.

1001. Chaenactis artemisiaefolia Gray.

Flowers white, turning pink. Plants 3--6
ft. tall growing with the preceding.
June 29, 1928; J. T. Howell.

1002. Helianthus gracilentus Gray.

Undershrub, 2--4 ft. tall, growing on rocky
hillsides in chaparral. Flowers yellow.
Seminole Hot Springs Road, 8 miles
south of Seminole Hot Springs, Santa
Monica Mts. El. c. 2000.ft.
June 29, 1928. J. T. Howell.

1003. Godetia bottae Spach.

Annual herb, 5 ft. high. Corolla lavender-pink. Growing on a gravelly road fill near the preceding. June 29, 1928; J. T. Howell.

1004. Venegasia carpesioides DC.

Flowers yellow. Plants 6 ft. tall, bushy growing on a road fill near the preceding. June 29, 1928. J. T.Howell.

1005. Rhus laurina Nutt.

Shrub 10 ft. tall. Flowers yellowish, pale. On road fill near the preceding. June 29, 1928. J. T.Howell.

1006. Carex spissa Bailey.

Culms 7 ft. high. Moist loamy soil in a springy place in the caparral near the preceding. June 29, 1928; J. T.Howell.

1007. Woodwardia radicans Sm. G-390

Fronds 6 ft. long. With thepreceding. June 29, 1928; J.T.Howell.

1008. Psoralea macrostachya DC.

Perennial herb 8 ft. high. Corolla purplish. With the preceding. June 29, 1928; J. T.Howell.

1009. Trichostema lanatum

Shrub 2 1/2 ft. high. Corolla blue, wool of inflorescence white. Growing in the chaparral about 6 miles south of Seminole Hot Springs, el. c. 1500 ft., in the Santa Monica Mts. June 29, 1928; J. T. Howell.

1010. Antirrhinum glandulosum Lindl. G-538

Bushy shrub, 8 ft. high and with a spread of 10 ft. Corolla pink, middle of lower lip yellowish white. In chaparral 2 miles south of Seminole Hot Springs, el. c. 1000 ft. Santa Monica Mts. June 29, 1928; J. T. Howell.

1011. Gilia gilioides Greene.

Spreading herb with deep lavender corolla. Growing in shade in sandy loam near Seminole Hot Springs, el. c. 1000 ft., Santa Monica Mts. June 29, 1928; J. T. Howell.

1012. Clarkia elegans Dougl.

With the preceding in sunny situation. June 29, 1928; J. T. Howell.

1013. Ellisia chrysanthemifolia Benth.

With no. 1011. Corolla white. June 29, 1928; J. T. Howell.

1014. Asclepias californica Greene.

Stems spreading on an open grassy hillside near the preceding. June 29, 1928; J. T. Howell.

1015. Pentstemon heterophyllus Lindl.

Insunny situation on the edge of chaparral near the preceding. Corolla purple-blue. June 29, 1928; J. T. Howell.

1016. Phacelia ramosissima Dougl.

Perennial with spreading stems. Corolla pale or sordid lavender. In rocky, dry stream bed, Santa Susana Pass, el. 1500 ft. June 30, 1928; J. T. Howell.

1017. Navarretia artactyloides H. & A.

Flowers dry when collected. Sandy places in chaparral with the preceding. June 30, 1928/ J. T.Howell.

1018. Hemizonia fasciculata T. & G.

With the preceding. Flowers yellow. June 30, 1928; J. T. Howell.

1019. Gilia gilioides Greene.

With the preceding. Corolla deep lavender. June 30, 1928; J. T. Howell.

1020. Hugelia virgata Benth.

With the preceding. Corolla limb blue, throat white. June 30, 1928; J. T. Howell.

1021. Eriogonum gracile Benth.

Flowers yellowish. With the preceding. June 30, 1928; J. T. Howell.

1022. Calochortus plummerae Greene.

Petals shaded with pink. Rocky points in chaparral with the preceding. June 30, 1928; J. T. Howell.

1023. Stephanomeria exigua, ~~var. coronaria~~ Jepson. (Nutt.)

Flowers white to pale lavender. With the preceding. June 30, 1928. J. T. Howell.

1024. Erigeron foliosus var. stenophyllus Lindl.

With the preceding. Rays lavender-purple. June 30, 1928; J. T. Howell.

1025. Zauschneria Californica Presl.

Corolla bright reddish. With the preceding. June 30, 1928; J. T. Howell.

1026. Solidago californica Nutt.

Flowers yellow. With the preceding.
June 30, 1928; J. T. Howell.

1027. Phacelia hispida Gray.

Corolla lavender. Sandy soil in the chaparral
near the preceding. June 30, 1928;
J. T. Howell.

1028. Verbena prostrata R. Br.

Corolla purplish, plant 2--3 ft. from
perennial root. With the preceding.
June 30, 1928; J. T. Howell.

1029. Monardella lanceolata Gray.

Corollas purple. With the preceding.
June 30, 1928; J. T.Howell.

1029A.. Psoralea macrostachya DC.

Moist soil of the Santa Ana River bottom,
Rancho Santa Ana. Plant 7 ft. tall,
flowers purplish. July 6, 1928; J. T. Howell.

1029B. Lotus eriophorus var.
heermannii Ottley.

Pl ants spreading. Corolla yellow turning red.
In sandy soil of the river bottom near the
preceding. July 6, 1928; J. T. Howell.

1030. Palmerella debilis var. serrata Gray

Perennial herb growing in the crevicesof rocks along stream just above water in Coldwater Canon just above Glen Ivy, east side of the Santa Ana Mts. Corolla blue. July 7, 1928; J. T. Howell. El. 1500.

1031. Scirpus microcarpus Presl.

With the preceding. July 7 , 1928; J. T. Howell.

1032. Pycnanthemum californicum Torr.

Corolla whitish. With the preceding . July 7, 1928/ J. T. Howell.

1033. Gnaphalium beneolens Dav.

On hot exposed slope in the chaparral, east side of the Santa Ana Mts. near Glen Ivy, el. 1500 ft. July 7, 1928; J. T. Howell.

1034. Dicentra chrysantha Walp.

Flowers yellow. With the preceding. Plants 3--6 ft. high from a woody base. July 7, 1928; J. T. Howell.

1035. Dendromecon rigida Benth.

Shrub 6 ft. high with yellow flowers. Near the preceding, el. 2000 ft. July 7, 1928; J. T. Howell.

1036. Romneya coulteri Harv.

Shrub 6--10 ft. high in the chaparral. Petals white, crepe-like. Santiago Trail above Glen Ivy with the preceding. July 7, 1928; J. T. Howell.

1037. Galium angustifolium Nutt.

Perennial herb or shrubby at the base, in the chaparral with the preceding. July 7, 1928; J. T. Howell.

1038. Helianthus gracilentus Gray.

Shrub 4 ft. high. Rays yellow. With the preceding. July 7, 1928; J. T. Howell.

1039. Erigeron foliosus Nutt.
var. stenophyllus.

Plant 1--2 ft. high. Rays purple, disk yellow. On edge of chaparral in gravelly soil near Glen Ivy, el. 1500 ft. July 7, 1928; J. T. Howell.

1040. Verbena prostrata R. Br.

Plant 2--3 ft. high. Corolla deep lavender. Near the preceding in sandy soil. July 7, 1928; J. T. Howell.

1041. Rhamnus californica Esch.

On open hill in semi-shade at Glen Ivy, el. 1300 ft. Flowers greenish-yellow. July 7, 1928; J. T. Howell.

1042. Hemizonia wrightii Gray.

Rocky wash in Temescal Canon at Glen Ivy, el. 1300 ft. Flowers yellow. July 8, 1928; J. T. Howell.

1043. Stephanomeria virgata Nutt.

Flowers lavender. With the preceding. July 8, 1928; J. T. Howell.

1044. Hugelia virgata Benth.

Corolla white or lavender. In sandy soil of wash with the preceding. July 8, 1928; J. T. Howell.

1045. Calochortus weedii Wood.

Petals yellow, brownish speckled. Inloamy soil in shaded canon surrounded by chaparral on the Santiago Peak Trail above Glen Ivy, East side of the Santa Ana Mts., el. 3500 ft. July 8, 1928; J. T.Howell.

1046. Helianthemum

Bushy herbaceous plants or sometimes almost shrubby, 1--1 1/2 ft. high. In gravelly soil in the chaparral near the preceding, el. 4000 ft. Flowers yellow. July 8, 1928; J. T. Howell.

1047. Oxytheca trilobata Gray.

Gravelly open in the chaparral with the preceding. July 8, 1928; J . T. Howell.

1048. Quercus chrysolepis Liemb.

Tree growing on steep mountain side, slope to north, surrounded by chaparral. Near the preceding, el. 5000 ft. July 8, 1928; J. T. Howell.

1049. Quercus wislizenii var. frutescens Engelm.

Shrub or tree with the preceding, 10 ft. high. July 8, 1928; J. T. Howell.

1050. Nama parryi Gray.

Herbage glandular, heavy-scented. Corolla lavender. Plants 7 ft. tall, growing in gravelly soil in chaparral. Near the preceding. July 8, 1928; J. T. Howell.

1051. Ceanothus divaricatus Nutt. G-397.

Shrub 6--7 ft. tall on rocky ridge in the chaparral with the preceding. July 8, 1928; J. T. Howell.

1052. Cordylanthus rigidus Jepson.

Gravelly open in chaparral near the preceding. July 8, 1928; J. T. Howell.

1053. Arctostaphylos glandulosa Eastw.

Shrub 3--6 ft. high, stump sprouting after fires. Fruit sticky-glandular. With the preceding. July 8, 1928; J. T. Howell.

1054. Pseudotsuga macrocarpa Mayr.

Along trail on Santiago Peak above Glen Ivy, el. 5000 ft. with the preceding, on northern slope. July 8, 1928; J. T. Howell.

1055. Pentstemon cordifolius Benth.

Shrub clambering over bushes 10-- 15 ft. Flowers reddish. Growing in a moist pocket in chaparral, Santiago Peak Trail above Glen Ivy, el. 3500 ft. July 8, 1928; J. T. Howell.

1056. Sphaeralcea densiflora Jepson.

Shrub 6--8 ft. tall. Petals lavender. On rocky slope in chaparral near the preceding, el. 3000 ft. July 8, 1928; J. T. Howell.

1057. Gilia gilioides Greene.

Corolla lavender-purple. Open in the chaparral near the preceding. July 8, 1928; J. T. Howell.

1058. Abronia villosa Wats.

Stems prostrate. Flowers bright rose-pink. Sandy flat in Temescal Canon, 6 miles s. of Glen Ivy. El. 1100 ft. July 9, 1928; J. T. Howell.

1059. Oenothera bistorta Nutt.

Petals yellow with brown spot at base. With the preceding. July 9, 1928; J. T. Howell.

1060. Croton californicus Mull. Arg.

Perennial herbs 2--3 ft. high. With the preceding. July 9, 1928; J. T. Howell.

1061. Pentstemon spectabilis Thurber.

Perennial herb 3 ft. high. Corolla limb blue, the tube purplish. With the preceding. July 9, 1928; J. T. Howell.

1062. Tetradymia comosa Gray.

Shrub 3 ft. high. Flowers yellow. With the preceding. July 9. 1928; J. T. Howell.

1063. Eriogonum gracile Benth.

Flowers yellowish. With thepreceding. July 9, 1928; J. T. Howell.

1064. Stephanomeria exigua var. coronaria Jepson.

Flowers lavender. With the preceding. July 9, 1928; J. T. Howell.

1065. Philibertia heterophylla Jepson.

Perennial herb with twining stems. With the preceding. July 9, 1928; J. T. Howell.

1066, Cucurbita palmata Wats.

Stems prostrate. Corolla orange-yellow. With the preceding. July 9, 1928; J. T. Howell.

1067. Chaenactis glabriuscula DC.

Flowers yellow. Plants in sandy open in the chaparral on the San Juan Canon Road in the Elsinore Mts., el. 2000 ft. July 9, 1928; J. T. Howell.

1068. Diplacus puniceus Nuttt.

Shrub 2 1/2 ft. high. Corolla bronze to deep red. Growing on rocky cut in the chaparral near the preceding. July 9, 1928; J. T. Howell.

1069. Hugelia virgata Benth. var.?

Corolla pale blue. In sandy open in chaparral at head of San Juan Canon, Elsinore Mts. el. 2600 ft. July 9, 1928; J. T. Howell.

1070. Pentstemon heterophyllus Lindl.

Perennial herb 1--2 ft. high. Corolla limb blue, throat purplish. On edge of chaparral i in grassy place. With the preceding. July 9, 1928; J. T. Howell.

1071. Mimetanthe pilosa Greene.

Corolla yellow. In sandy, dry stream bed near the preceding. July 9, 1928; J. T. Howell.

1072. Monardella lanceolata Gray.

Corolla purple. Near the preceding on a grassy hillside. July 9, 1928; J. T. Howell.

1073. Godetia quadrivulnera Spach.

Petals deep purple. With the preceding.
July 9, 1928; J. T. Howell.

1074. Calycadenia tenella T. & G.

Corolla white. With the preceding.
July 9, 1928; J. T. Howell.

1075. Antirrhinum coulterianum var.
nevinianum Jepson.
Corolla whitish. Plants 5--7 ft. high,
growing on a rocky cut in the chaparral
along San Juan Canon Road in Elsinore Mts.,
el. 2400 ft. July 9, 1928; J. T. Howell.

1076. Centromadia pungens Greene.

Flowers yellowish. Open valley land,
2 miles south of Murietta in clay soil.
El. 1000 ft. July 9, 1928; J. T. Howell.

1077. Hemizonia paniculata Gray.

Flowers yellow. Open valley land at Temecula,
el. 1000 ft. July 9, 1928; J. T. Howell.

1078. Hugelia virgata Benth.

Limb of corolla blue, the throat white.
Sandy open in chaparral, on the Temecula Grade,
4 miles south of Temecula, el. 1300 ft.
July 9, 1928; J. T. Howell.

1079. Calochortus weedii Wood.

Petals yellow with brownish specks. In rocky soil in the chaparral with the preceding. July 9, 1928; J. T. Howell.

1080. Arctostaphylos pungens H.B.K.

Low shrub 1--3 ft. high, stump sprouting after fire. Fruit apparently glabrous. With the preceding. July 9, 1928; J. T. Howell.

1081. Chorizanthe fimbriata var. laciniata Jepson.

Calyx bright rose. In sandy soil on road between Temecula and Fallbrook in Riverside County near southern county line. July 9, 1928; J. T. Howell. El. 1200 ft.

1082. Hemizonia fasciculata T. & G.

Flowers yellow. Open valley land 8 miles ne. of Fallbrook, el. 1200 ft. July 9, 1928; J. T. Howell.

1083. Centaurium venustum Rob.

Moist soil along road in valley land near the preceding. July 9, 1928; J. T. Howell.

1084. Antirrhinum nuttallianum Benth.

Corolla lavender-purple. Rocky soil of road cut near the preceding. July 9, 1928; J. T. Howell.

1085. Frankenia grandifolia C. & S.

Corolla lavender-rose. Edge of marsh in saline soil 8 miles east of Oceanside, San Diego Co., el. 100 ft. July 9, 1928; J. T. Howell.

1086. Scirpus acutus Muhl.

Stems 8--10 ft. high. In shallow water of marsh, near the preceding. July 9, 1928; J. T. Howell.

1087. Abronia maritima Nutt.

Stems prostrate. Calyx rose-purple. In sandy soil of sea beach, Capistrano Beach, San Diego Co. July 10, 1928. J. T. Howell.

1088. Mimulus brevipes Benth.

Corolla yellow. Open in chaparral in clay soil. Six miles below governmeht camp in Trabucco Canon, Santa Ana Mts., Orange Co., el. 1000 ft. July 10, 1928; J. T.Howell. The government camp is situated near the junction of Trabucco and Holy Jim Canons.

1089. Phacelia minor.Thell.

Corolla purple. Growing in sandy wash 3 miles below government camp in Trabucco Canon. El. 1250 ft. July 10, 1928; J. T. Howell.

1090. Zauschneria Californica var. villosa Jepson.

Flowers reddish. In gravelly soil in open rocky wash on Trabucco Creek, Trabucco Canon, 2 miles below the government Camp. El. 1500 ft. July 10, 1928; J. T. Howell.

1091. Trifolium involucratum Ort.

Moist creed bottom near the government camp in Trabucco Canon, el. 1700 ft. July 10, 1928; J. T. Howell.

1092. Lotus eriophorus var. heermannii Ottley.

Corolla yellow turning red. Stems spreading 3--4 ft. With the preceding. July 10, 1928; J. T. Howell.

1093. Grindelia camporum Greene (?)

Growing with no. 1088. Flowers yellow. This plant similar to the form on Rancho Santa Ana, but this with rays. Rays as many as 28. July 10, 1928; J. T. Howell.

1094. Monardella hypoleuca Gray.

Corolla white fading lavender. Under trees on edge of chaparral near Orange Co. Park, in lower end of Black Star Canon, Snata Ana Mts., el. 1000 ft. July 10, 1928; J. T. Howell.

1095. Salvia leucophylla Greene.

Corolla lavender. Open hillside below true chaparral in gravelly soil. Plants 3--4 ft. high. Black Star Canon, Santa Ana Mts., el. 1500 ft. July 10, 1928; J. T. Howell.

1096. Dicentra ochroleuca Engelm.

Flowers creamy white. Stems 4 ft. high. Open gravelly slope in chaparral at head of Black Star Canon, el. 2300 ft. July 10, 1928; J. T. Howell.

1097. Porophyllum gracile Benth.

Flowers whitish. Gravelly slope in chaparral in Hidden Canon in the ne. Santa Ana Mts., el. 1300 ft. July 10, 1928; J. T. Howell.

1098. Stachys californica Benth. (?) ~~ajugoides var. stricta Jepson~~.

Gaviota Pass.
Aug. 21, 1928; E. R. Johnson.

1099. Rhamnus californica Esch.

Gaviota Pass.
Aug. 21, 1928; E. R. Johnson.

1100. Stephanomeria virgata Benth.

Eight miles north of Los Alamos, Santa Barbara Co. Aug. 21, 1928; E. R. Johnson.

1101. Lessingia glandulifera Gray.

With the preceding.
Aug. 21, 1928; E. R. Johnson.

1102. Zauschneria californica Presl.

Cuesta Pass, north of San Luis Obispo.
Aug. 21, 1928. E. R. Johnson.

1103. Cornus californica C. A. Mey.

With the preceding.
Aug. 21, 1928; E. R. Johnson.

1104. Hazardia squarrosa Greene.

With the preceding.
Aug. 21, 1928; E. R. Johnson.

1105. Umbellularia californica Nutt.

Cuesta Pass, north of San Luis Obispo.
Aug. 21, 1928; E. R. Johnson.

1106. Symphoricarpos albus Blake.

Russian River, one half mile east of Cloverdale. Aug. 22, 1928; E. R. Johnson.

1107. Eriogonum nudum Dougl.

With the preceding.
Aug. 22. 1928; E. R. Johnson.

1108. Lotus americanus Bisch.

With the preceding.
Aug. 22, 1928; E. R. Johnson.

1109. Clematis ligusticifolia Nutt.

With the preceding.
Aug. 22, 1928; E. R. Johnson.

1110. Madia elegans Don.

Cloverdale. Aug. 22, 1928;
E. R. Johnson.

1111. Hemizonia clevelandii Greene.

With the preceding.
Aug. 22, 1928; E. R. Johnson.

1112. Eriogonum nudum Dougl.

Cloverdale. Aug. 22,1928:
E. R. Johnson.

1113. Verbascum blattaria L.

With the preceding.
Aug. 22, 1928; E. R. Johnson.

1114. Cuscuta californica Choisy.

Near Booneville, Mendocino Co.
Aug. 23, 1928; E. R. Johnson.

1114A. Boisduvalia densiflora Wats.

Philo, Mendocino Co.
Aug. 23, 1928; E. R. Johnson.

1115. Aster

With the preceding.
Aug. 23, 1928; E. R. Johnson.

1116. Mentha pulegium L.

With the preceding.
Aug. 23, 1928; E. R. Johnson.

1117. Epilobium angustifolium L.

Albion, Mendocino Co.
Aug. 23, 1928; E. R. Johnson.

G-434

1118. Lupinus nevularis Dougl.

Albion, Mendocino Co.
Aug. 23, 1928; E. R. Johnson.

G-435.

1119. Myrica californica Cham.

With the preceding.
Aug. 23, 1928; E. R. Johnson.

1120. Ceanothus thyrsiflorus var. griseus Trel.

With the preceding.
Aug. 23, 1928; E. R. Johnson.

1121. Diplacus aurantiacus Jepson.

With the preceding.
Aug. 23, 1928; E. R. Johnson.

1122. Cirsium lanceolatum Scop.

With the preceding.
Aug. 23, 1928. E. R. Johnson.

1123. Hypochoeris radicata L.

Ft. Bragg. Aug. 23, 1928;
collected by E. R. Johnson.

1124. Lonicera hispidula var. californica Jepson.

With the preceding. Aug. 23, 1928;
collected by E. R. Johnson.

1125. Senecio (?) jacobaea

With the preceding. Aug. 23, 1928.
Collected by E. R. Johnson.

1126. Mimulus guttatus DC.

With the preceding. Aug. 23,1928.
Collected by E. R. Johnson.

1127. Solidago spathulata DC.

With the preceding. Aug. 23, 1928;
collected by E. R. Johnson.

1128. Campanula linnaeifolia Gray.

With the preceding. Aug. 23, 1928.
Collected by E. R. Johnson.

1129. Montia siberica Howell.

With the preceding. Aug. 23, 1928.
Collected by E. R. Johnson.

1130. Ranunculus repens L.

Ft. Bragg. Aug. 23, 1928;
collected by E. R. Johnson.

1131. Veronica americana Schwein.

With the preceding. Aug. 23, 1928;
collected by E. R. Johnson.

1132. Stachys chamissonis Benth.

With the preceding. Aug. 23, 1928.
Collected by E. R. Johnson.

1133. Mimulus guttatus DC.

With the preceding. Aug. 23, 1928.
Collected by E. R. Johnson.

1134. Vitis californica Benth.

Lane's Redwood Camp, South Fork of the Eel River, south of
Aug. 24, 1928; collected by E. R. Johnson.

1135. Juncus obtusatus Engelm.

With the preceding. Aug. 24, 1928;
collected by E. R. Johnson.

1136. Fraxinus oregona Nutt.

With the preceding. Aug. 24, 1928.
Collected by E. R. Johnson.

G-436.

1137. Holidiscus discolor Maxim.

Lane's Redwood Camp, South Fork of the Eel River, on Redwood Highway. Aug. 24, 1928. Collected by E. R. Johnson.

1138. Quercus chrysolepis Liemb.

With the preceding. Aug. 24, 1928. Collected by E. R. Johnson.

1139. Pentstemon corymbosus Benth.

With the preceding. Aug. 24, 1928. Collected by E. R. Johnson.

1140. Ceanothus incanus T. & G.
G-437.

With the preceding. Aug. 24. 1928. Collected by E. R. Johnson.

1141. Brickellia californica T. & G.

With the preceding. Aug. 24, 1928. Collected by E. R. Johnson.

1142. Vaccinium ovatum Pursh.

With the preceding. Aug. 24, 1928. Collected by E. R. Johnson.

1143. Ceanothus parryi Trel. G-438.

Eureka. Aug. 25, 1928.
Collected by E. R. Johnson.

1144. Eriophyllum staechadifolium Lag.

Eureka. Aug. 25, 1928.
Collected by E. R. Johnson.

1145. Grindelia cuneifolia Nutt. (?)

Eureka. Aug. 25, 1928.
Collected by E. R. Johnson.

1146. Picea sitchensis Carr.

Arcata. Aug. 26, 1928.

Collected by E. R. Johnson.

1147. Smilacina amplexicaulis Nutt.

Arcata. Aug. 26, 1928.
Collected by E. R. Johnson.

1148. Disporum smithii Piper.

Arcata. Aug. 26, 1928.
Collected by E. R. Johnson.

1149. Thuja plicata Don.

Seven miles east of Arcata. Aug. 26, 1928.
Collected by E. R. Johnson.

1150. Quercus garryana Hougl.

Summit between Willow and Redwood C reeks, Trinity River Road. Aug. 26, 1928. Collected by E. R. Johnson.

1151. Tsuga heterophylla Sarg.

On Arcata-- Hoopa Road. Aug. 26, 1928. Collected by E. R. Johnson.

1151A. Quercus Kelloggii Newb.

Junction City. Aug. 26, 1928. Collected by E. R. Johnson.

1152. Cercis occidentalis Torr. G- 439

Five miles east of Weaverville. Aug. 26, 1928. Collected by E. R. Johnson.

1153. Lonicera interrupta Benth.

Between Weaverville and Lewiston. Aug. 26, 1928. Collevted by E. R. Johnson.

1154. Crategus douglasii Lindl. G441

Lowden's Ranch, four miles south of Lewiston. Aug. 27, 1928. Collected by E. R. Johnson.

1155. Asclepias

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1156. Eriogonum virgatum Benth.

Lowden's Ranch, four miles south of Lewiston. Aug. 27, 1928. Collected by E. R. Johnson.

1157. Madia elegans Don.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1158. Rhododendron occidentale Gray.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1159. Arctostaphylos viscida Parry. G-4424

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1160. Quercus chrysolepis Liebm.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1161. Cercocarpus betuloides Nutt.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1162. Hemizonia clevelandii Greene.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1163. Verbena prostrata R. Br.

Lowden's Ranch, four miles south of Lewiston. Aug. 27, 1928. Collected by E. R. Johnson.

1164. Eriogonum nudum var. oblongifolium Wats.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1165. Epilobium californicum Hausskn.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1166. Lessingia fastigiata Greene acc. Jepson in Manual.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1167. Trichostema laxum Gray.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1168. Arctostaphylos manzanita Parry.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson. G-443.

1169. Rhamnus purshiana DC.

With the preceding. Aug. 27, 1928. Collected by E. R. Johnson.

1170. Spiraea douglasii Hook.

Lowden's Ranch, four miles south of Lewiston.
Aug. 27, 1928. E. R. Johnson, collector.

1171. Acer. circinatum Pursh. G-440

With the preceding. Aug. 27, 1928.
Collected by E. R. Johnson.

1172. Mentzelia laevicaulis T. & G.

On the Trinity River above Lewiston.
Aug. 28, 1928. Collected by E. R. Johnson.

1173. Cornus sessilis Torr. G-446.

Three miles south of Trinity Center.
Aug. 28, 1928. Collected by E. R. Johnson.

1174. Taxus brevifolia Nutt. G-445

With the preceding. Aug. 28, 1928.
Collected by E. R. Johnson.

1175. ~~Crataegus~~ Pyrus sitchensis Roem. G-444

Ten miles northeast of Trinity C enter on
East Fork of the Trinity River.
Aug. 28, 1928. Collected by E. R. Johnson.

1176. Chamaecyparis lawsoniana Parl.

With the preceding near the Bonanza King power
house. Aug. 28, 1928. Collected by
E. R. Johnson.

1177. Cornus nuttallii Aud.

Between Weaverville and Trinity Center.
Aug. 29, 1928. Collected by E. R. Johnson.

1178. Garrya fremontii Tor. G-448

Between Lewiston and Weaverville. Trinity Co 1500 ft 448
Aug. 29, 1928. Collected by E. R. Johnson.

1179. Quercus wislizenii A. DC.

With the preceding. Aug. 29, 1928.
Collected by E. R. Johnson.

1180. Eriodictyon californicum Greene.

With the preceding. Aug. 29, 1928.
Collected by E. R. Johnson.

1181. Galium

With the preceding. Aug. 29, 1928.
Collected by E. R. Johnson.

1182. Cephalanthus occidentalis L.

One mile below Oak Bottom on road between
Weaverville and Redding. Aug. 30, 1928.
Collected by E. R. Johnson.

G-449

1183. Cupressus macnabiana Murr.

Near Shasta City. Aug. 30, 1928.
Collected by E. R. Johnson.

Topotype (?)

1184. Phoradendron bolleanum Eichl.

Parasitic on the preceding. Aug. 30, 1928.
Collected by E. R. Johnson.

1185. Quercus garryana Dougl.

Five miles east of Burney. Aug. 30, 1928.
Collected by E. R. Johnson.

1186. Juniperus occidentalis Hook.

Ten miles east of Burney. Aug. 31, 1928.
Collected by E. R. Johnson.

1187. Quercus

With the preceding. Aug. 31, 1928.
Collected by E. R. Johnson.

1188. Cercocarpus betuloides Nutt. G-452

Fifteen miles east of Burney. Aug. 31, 1928.
Collected by E. R. Johnson.

1189. Lonicera interrupta Benth.

With the preceding. Aug. 31, 1928.
Collected by E. R. Johnson.

G-453

1190. Chrysothamnus nauseosus var. albicaulis Rydb.

Fall River Valley. Aug. 31, 1928.
Collected by E. R. Johnson.

1191. Chrysothamnus nauseosus var. consimilis Hall.

Big Valley, south of Lookout. Aug. 31, 1928.
Collected by E. R. Johnson.

1192. Ceanothus prostratus Benth.

Four miles west of Lookout. Aug. 31, 1928.
Collected by E. R. Johnson.

1193. Cercocarpus ledifolius Nutt.

East side of lava beds between Lookout and Bartle. Aug. 31, 1928.
Collected by E. R. Johnson.

1194. Prunus emarginata Walp. G-451

On the lava beds near the preceding.
Aug. 31, 1928. Collected by E. R. Johnson.

1195. Prunus subcordata Benth.

West edge oflava beds between Lookout and Bartle. Aug. 31, 1928; E. R. Johnson, coll.

1196. Pinus contorta var. murrayana Engelm. G-456

Ten miles east of Bartle. Aug. 31, 1928.
Collected by E. R. Johnson.

1197. Populus tremuloides Michx.

Ten miles east of Bartle. Aug. 31, 1928.
Collected by E. R. Johnson.

1198. Ceanothus cordulatus Kell.

Between Bartle and McCloud. Aug. 31, 1928.
Collected by E. R. Johnson.

1199. Forestieria neo-mexicana Gray. G-454

King City. Sept. 2, 1928.
Collected by E. R. Johnson.

1201. Quercus lobata Nee

On the Arroyo Seco River, Santa Lucia Mts.,
near the Indians. Sept. 2, 1928.
Collected by E. R. Johnson.

1200. Quercus douglasii H. & A.

King City. Sept. 2, 1928.
Collected by E. R. Johnson.

1202. Malacothrix saxatilis T. & G.

Along coast north of Santa Barbara.
Sept. 2, 1928. Collected by E. R. Johnson.

1203. Potamogeton crispus L.

Growing in stagnant and slowly moving water in the Santa Ana River bottom short distance west of the ranch houses, Rancho Santa Ana. Plants entirely submerged. This plant was observed last summer and was watched during the past autumn and spring but no flowers have been seen.
Sept. 6, 1928. Collected by J. T. Howell.

1204. Wolffiella lingulata Hglm.

Fairly common with species of Lemna and Azolla filiculoides, floating of the surface of quiet ponds in the Santa Ana River bottom with the preceding.
Sept. 6, 1928. Collected by J. T. Howell.

1205. Oenothera hookeri T. & G.

Plants 3---6 (or perhaps more) ft. high. Flowers clear yellow. Growing in moist places in the Santa Ana River bottom near the ranch houses. Sept 6, 1928. Collected by J. T. Howell.

1206. Paspalum

Growing in moist, sandy soil along a stream bank near the preceding. Sept. 6, 1928. Collected by J. T. Howell.

1207. Hydrocotyle ranunculoides L. f.

One patch of this plant has been found in the Santa Ana River Bottom on the Rancho Santa Ana, and one o

wonders why it is not more wide-spread since localities where it might thrive abound. Although it has been watched for some time, no flowers have been observed. Growing on wet ground and in shallow water. Sept. 6, 1928. Collected by J. T. Howell.

1208. Gnaphalium leucocephalum Gray.

Plants quite abundant in dry, exposed situation on sandy "island" in the midst of the river bottom, Rancho Santa Ana. Not seen elsewhere on the ranch except for one small, non-blooming plant in the Botany Garden near the house. It, together with Hugelia densifolia var. sanctora with which it grows, has probably been "introduced" tothis section of the Santa Ana River by high water. Sept. 6, 1928. Collected by J. T. Howell.

1209. Portulaca oleracea L.

Weed around the ranch houses, which for some unknown reason escaped my notice last summer a year ago.
Sept. 17, 1928. Collected by J. T. Howell.

1210. Amaranthus retroflexus L.

Tall herb, often over 4 ft. Near the ranch houses, Rancho Santa Ana. Sept. 20, 1928; J. T. Howell.

1211. Umbellularia californica Nutt. G-457

One mile west of Seminole Hot Springs, Santa Monica Mts. El. c. 1000 ft. Sept. 30, 1928; B. D. Stark.

1212. Opuntia

Plants spreading and forming a dense bed, not more than 3 or 4 joints high. Conspicuous because of numerour long bright brown spines; joints light green, slightly glaucous, obtuse, elliptic-obovate (22 X 15 cm.), obovate (20 X 13.5 cm.), or nearly round (15 cm.); fruit pale rose-purple somewhtat glaucous, areoles often with one deflexed, rather weak but definite spine, fruit contracted to stipe-like base, 6 cm. long, umbilicus impressed, usually deeply so. Rancho Santa Ana, Oct. 30, 1928; J. T. Howell.

1213. Opuntia

Shrubby with several trunks from the base, these nearly strictly erect, 7 ft. high, woody and roundish; branches spreading along the ground or the upper ones tending to drpoop; joints elliptical, obovate or round (22 X 12.5 cm.), (27 X 17 cm.), (15 X 13), light green, very slightly glaucous; fruit globose-oblong, 4--6 cm. long, purplish-red, conspicuous with long glochids

especially at top, unbilicus generally depressed. Rancho Santa Ana, Nov. 5, 1928; J. T. Howell.

1214. Opuntia

Stems spreading from base forming thicket up to 3 ft. high; joints rounded-obovate to elliptic, (20 X 15 cm.), (17 X 15 cm.), (33 X 19 cm.), often very large, grey-green, glaucous; fruit 5--8 cm. long, glaucous-reddish, globular to oblongish, the umbilicus tending to surpass top of fruit. Rancho Santa Ana, Nov. 7, 1928; J. T. Howell.

1215. Opuntia

Plants erect-shrubby or spreading and forming thickets, 3--6 ft. high; joints becoming very large, elliptical to broadly obovate, green, and slightly glaucous, (19 X 15 cm.), (30 X 20 cm.), (28 X 16 cm.); fruit purplish, 5--5.5 cm. long, unbilicus depressed, globose-oblong, somewhat narrowed at the base. Rancho Santa Ana, Dec. 7, 1928; J. T. Howell.

1216. Opuntia

Plants shrubby, more or less erect with generally a distinct trunk; joints variously shaped, often twinned or triangular, but nearly always acute or acutish at apex; green, tending to be yellow-green; fruit globose, purplish about 5 cm. long, unbilicus horizontal, sometimes the fruits twinned. The characters unstable as indicated in twinned and triangular joints and twinned fruits, and fruits passing below into a joint without articulation. Rancho Santa Ana, Dec. 7, 1928; J. T. Howell.

The above collections represent the most marked and conspicuous forms of platyopuntia found within the Botany Garden

on the Rancho Santa Ana. The collection does not include the low-growing form which is apparently O. vaseyi B. & R. which was collected on June 21, 1927, number 189. The last form collected (i. e. no. 1216) is probably the same as no.190 of June 21, 1927 and is believed to be the nearest approach to O. occidentalis E. & B. of any of the forms of Opuntia found on the ranch. The other forms might represent various forms, hybrids, integradations between the species which are introduced, O. megacantha and O. ficus-indica, and the species which is native, O. occidentalis. At least these forms cannot be determined by any key known to me, although they all have distinctive characters that would easily distinguish them one from the other if put in key form.

The measurements given above are from living material about to be dried for specimens.
------J. T. H.

Field Notes —
Rancho Santa Ana Herbarium

1929.

(card index to here ens)

1217. Arctostaphylos glandulosa Eastw. (?)

Corolla waxy, shaded with pink. Growing along the trail between Claymine Canon and Sierra Peak in the northern Santa Ana Mts., Orange Co., where no. 222 was collected in fruit. Jan. 24, 1929. El. 1500 ft. J. T. Howell collector.

1218. Arctostaphylos glauca Lindl.

With the preceding. Many specimens with fruit already set. Collected where no. 223 was collected in fruit. Jan. 24, 1929. J. T. Howell collector.

1219. Ceanothus crassifolius Torr.

Near the crest of the Santa Ana Range south of Sierra Peak in the chaparral. Flowers whitish. Jan. 24, 1929; J. T. Howell collector. Orange Co. El. 2500 ft.

1220. Adiantum emarginatum Hook.

Moist, shaded bank, Claymine Canon, n. Santa Mts., Orange Co. El. 700 ft. J. T. Howell, collector. Feb. 6, 1929.

1221. Pellaea andromedaefolia Fee.

With the preceding. Feb. 6, 1929; J. T. Howell, collector.

1222. Capsella burаa-pastoris Moench.

Moist, sandy soil in partially shaded place, floor of Claymine Canon near the preceding. El. 600 ft. Feb. 6, 1929; J. T. Howell, collector.

1223. Lepidospartum squamatum Gray.

Sandy wash on the floor of Claymine Canon near the preceding. Feb. 6, 1929; J. T. Howell, collector. El. 500 ft.

1224. Ceanothus tomentosus Parry.
var. olivaceus Jepson.

Flowers blue. Shrub 4 ft. high growing in the chaparral along the trail from Claymine Canon to Sierra Peak, n. Santa Ana Mts. El. 1100 ft. Feb. 11, 1929; J. T. Howell, collector.

1225. Ribes malvaceum Sm.

Flowers deep pink. Shrub 3 ft. high growing in the dense shade of the fork of Claymine Canon heading under Sierra Peak, n. Santa Ana Mts., el. 1000 ft. Feb. 11, 1929; J. T. Howell, collector.

1226. Dentaria integrifolia var.
californica Jepson.

Petals varying from lavender to white. Growing in humus soil on the rocky floor and canon walls near the preceding. Feb. 11, 1929; J. T. Howell.

last entry
by J. T. Howell

H- 1227.

Ceanothus crassifolius Torr.

6 ft. high, 4 ft. spread.
2 miles so. of Alber hill, Riverside Co
J.T. Howell 13 Feb., 1929.

H- 1228.

Dodecatheon

6 mi. so. of Corona, Riverside Co.
J.T. Howell 14 Feb., 1929.

H- 1229.

Baeria

3 miles so. of Glen Ivy, Riverside Co.
J.T.Howell 14 Feb.,1929

H- 1230.

Allium

3 mi. so. of Glen Ivy, Riverside Co.
J.T.Howell 14 Feb.,1929

H- 1231.

Notholaena

rock crevices, arid hills on e. side of Temescal Canyon, 3 mi. so. of Glen Ivy, Riverside Co.
J.T.Howell 14 Feb.,1929

H-1232.

Coreopsis

sandy wash of Temescal Canyon, 2 mi. so. of Glen Ivy, Riverside Co.,
J.T.Howell 14 Feb. 1929

H-1233.

Lathyrus

open places in chaparral, Santiago Trail above Glen Ivy, Riverside Co.
J.T. Howell 14 Feb., 1929

H- 1234. G-508

Umbellularia californica Nutt.

City Creek Rd., Barrel Springs, San Bernardino Co.
J.T.Howell 20 Feb.,1929

H-1235.

Pinus tuberculata Gord.

3 mi. above.Barrel Springs, San Bernardino Co.
J.T.Howell 20 Feb.,1929

H- 1236. G-510

Pickeringia montana Nutt.

3 mi. above Barrel Springs,
San Bernardino Co.
J.T.Howell 20 Feb.,1929

H- 1237.

Arctostaphylos glauca Lindl.

3 mi. above Barrel Springs.
San Bernardino Co.
J.T.Howell 20 Feb.,1929

H-1238. G-511

Trichostema lanatum ~~Benth.~~ denudatum Gray.

3 mi. above Barrel Springs,
San Bernardino Co.
J. T. Howell 20 Feb.,1929

H-1239. G-512

Dendromecon rigida Benth.

3 mi. above Barrel Springs,
San Bernardino Co.
J.T.Howell 20 Feb., 1929

H-1240.

Arctostaphylos tomentosa (Pursh) Lindl.

3 mi. above Barrel Springs,
San Bernardino Co.
J.T.Howell 20 Feb.,1929

H-1241. G-513

Eriodictyon tichocalyx Heller

Cactus Flat, San Bernardino Co.
J.T.Howell 21 Feb.,1929

H-1242. G-514

Purshia glandulosa Curran

Cactus Flat, San Bernardino Co.
J.T.Howell 21 Feb.,1929

H-1243. G-515

Prunus

Cactus Flat, San Bernardino Co.
J.T.Howell 21 Feb.,1929

H-1244. G-516

Salvia carnosa compacta Hall.

Cactus Flat, San Bernardino Co.
J.T.Howell 21 Feb.,1929

H-1245.

Arctostaphylos glauca Lindl.

Cushenberry Grade, San Bernardino Co., 4000 ft.
J.T.Howell 21 Feb.,1929

H-1246 G-517

Chilopsis linearis DC.

½ mile below Cushenberry Springs, San Bernardino Co.
J.T.Howell 21 Feb.,1929

H-1247

Arctostaphylos glauca Lindl.

Summit of Cajon Pass, San Bernardino Co. 4200 ft.
J.T.Howell 21 Feb.,1929

H-1248 G-521

Styrax

City Creek Rd., San Bernardino Co. 2500 ft.
J.T.Howell 28 Feb.,1929

H-1249 G-518

Trichostema lanatum denudatum Gray

so. side of Cajon Pass, San Bernardino Co. 4000 ft.
J.T.Howell 21 Feb.,1929

H-1250

Ribes malvaceum Sm.

Canyon leading west from north side of Roundtop, Rancho Santa Ana.
E.R.Johnson 12 March 1929

1500 ft.

H-1251

Ribes malvaceum Sm

Canyon west of Roundtop, Rancho Santa Ana. 1500 ft.
E.R.Johnson 12 March 1929

H-1252

Ceanothus spinosus nuttall
granada Estates det. N.E. McMinn
Mulholland Drive, Los Angeles Co.
E.R.Johnson 31 March 1929

H-1253 Venegasia carpesioides DC.

Mulholland Drive, Los Angeles Co.
E.R.Johnson 31 March 1929

H-1254

Fritillaria biflora Lindl.

Sierra Peak Trail, Santa Ana Mts.
Orange Co.
E.R.Johnson 11 April 1929

H-1255

Lomatium

Sierra Peak Trail, Santa Ana Mts.
Orange Co.
E.R.Johnson 11 April 1929

H-1256

Zygadenus fremontii Watson

Sierra Peak Trail, Santa Ana Mts.
Orange Co.
E.R.Johnson 11 April, 1929

H-1257

Fraxinus dipetala Hook.& Arn.

Sierra Peak Trail, Santa Ana Mts.
Orange Co.
E.R.Johnson 11 April 1929

H-1258

Eriodictyon crassifolium Benth.

Sierra Peak Trail, Santa Ana Mts.
Orange Co.
E.R.Johnson 11 April 1929

H-1259

Pedicularis densiflora Benth.

Sierra Peak Trail, Santa Ana Mts.
Orange Co.
E.R.Johnson 11 April 1929

H-1260

Plantago erecta Morris

Sierra Peak Trail, Santa Ana Mts.
Orange Co.
E.R.Johnson 11 April 1929

H-1261

Cercocarpus betuloides Nuttall

Sierra Peak Trail, Santa Ana Mts.
Orange Co.
E.R.Johnson 11 April 1929

H-1262

Arctostaphylos glauca Lindl.

Sierra Peak Trail, Santa Ana Mts.
Orange Co.
E.R.Johnson 11 April 1929

H-1263

Quercus

Sierra Peak Trail, Santa Ana Mts.
Orange Co.
E.R.Johnson 11 April 1929

H-1264 G-534

Pinus coulteri Don.

City Creek Road, San Bernardino Mts.
San Bernardino Co.
B.D.Stark 12 April 1929

H-1265

Abronia

sandy lands 1 mile west of Atwood,
Orange Co. 300 M. ?
E.R.Johnson 6 April 1929

H-1266 G-543

Ceanothus macrocarpus

Claymine Canyon, Orange Co.
B.D.Stark July 1929

H-1267 G-544

Ceanothus

Claymine Canyon, Orange Co.
B.D.Stark July 1929

H-1268 G-545

Holacantha emoryi Gray

3-10 W.
Hayfields, Chuckawalla Valley,
Colorado Desert, Riverside Co.
B.D.Stark April 1929

H-1269

Oenothera

Below Torrey Pines Park,
San Diego Co.
E.R. Johnson 17 April 1929

H-1270

Phacelia

Sand flats below Torrey Pines Park,
San Diego Co.
E.R.Johnson 17 April 1929

H-1271

Lotus

Sand flats below Torrey Pines Park
San Diego Co. 25 ft.
E.R.Johnson 17 April 1929

H-1272

Matthiola

Sand flats below Torrey Pines Park,
San Diego Co. An Escape. 50 ft d.
E.R.Johnson 17 April 1929

H-1273

Abronia

Sand flats below Torrey Pines Park,
San Diego Co. 25 ft.
E.R.Johnson 17 April 1929

H-1274

Cakile edulenta californica Fer.

Sand flats below Torrey Pines Park,
San Diego Co.
E.R.Johnson 17 April 1929

H-1275

Lupinus

no. slope of Lyon Mt., 1 mi. east
of Ranger Station.
San Diego Co. 17 April 1929

H-1276

Sidalcea malvaeflora Gray.

Between San Diego and Alpine,
San Diego Co.
E.R.Johnson 17 April 1929

H-1277

Silene gallica L.

Stewart's Station between San
Diego and Alpine.
San Diego Co.
E.R.Johnson 17 April 1929

H-1278

Adolphia californica Wats.

Mahogany Canyon, San Diego City,
San Diego Co.
E.R.Johnson 17 April 1929

H-1279

Simmondsia californica Nutt.
♀

Mahogany Canyon, San Diego City,
San Diego Co.
E.R.Johnson 17 April 1929

H-1280

Simmondsia californica Nutt.
♂

Mahogany Canyon, San Diego City,
San Diego Co.
E.R.Johnson 17 April 1929

H-1281

Viola

Lyons Valley Road,
San Diego Co.
E.R.Johnson 17 April 1929

H-1282

Arctostaphylos bicolor (Nutt.) Gray

along the road from Jamul to
Barrett Lake, San Diego Co.
E.R.Johnson 17 April 1929

H-1283

Ceanothus divaricatus Nutt.

5 miles below Barrett Dam,
San Diego Co.
E.R.Johnson 17 April 1929

H-1284

Ceanothus ~~diganthus orcuttii Trel.~~ perplexans Trelease

3 miles above Barrett Dam, fruit needed.
San Diego Co.
E.R.Johnson 17 April 1929

H-1285

Ceanothus diganthus orcuttii Trel. ?

2 miles above Barrett Dam, Lyons
Creek road, San Diego Co.
E.R.Johnson 17 April 1929

fruit needed for identification.

H-1286

Allium peninsulare Lemmon.

Cottonwood Creek, below Barret Dam
San Diego Co.
E.R. Johnson 17 April 1929

H-1287

Chaenactis

Cottonwood Creek, below Barret Dam,
San Diego Co.
E.R. Johnson 17 April 1929

H-1288

Cercocarpus betuloides Nutt.

2 miles above Barrett Dam,
San Diego Co.
E.R. Johnson 17 April 1929

H-1289

Emmenanthe penduliflora Benth.

Cottonwood Creek, below Barret Dam,
San Diego Co.
E.R. Johnson 17 April 1929

H-1290

Ellisia

Cottonwood Creek, below Barret Dam,
San Diego Co.
E.R. Johnson 17 April 1929

H-1291 Linaria canadensis Dum.

Cottonwood Creek, below Barrett Dam,
San Diego Co.
E.R. Johnson 17 April 1929

H-1292

Lathyrus strictus nuttall.

Cottonwood Creek, below Barrett Dam,
San Diego Co.
E.R. Johnson 17 April 1929

H-1293

Emmenanthe penduliflora Benth.

Cottonwood Creek, below Barrett Dam
San Diego Co.
E. R. Johnson 17 April 1929

H-1294

Ceanothus divaricatus Nutt.
det W.E. McMinn.

3 miles above Barrett Dam,
San Diego Co.
E.R. Johnson 17 April 1929

H-1295

Monardella macrantha Gray.

Cottonwood Creek, below Barrett Dam,
San Diego Co.
E. R. Johnson 17 April 1929

H-1296

Lupinus Brittoni Abrams.

Cottonwood Creek, below Barrett Dam,
San Diego Co.
E.R. Johnson 17 April 1929

H-1297

Ribes roezlii Regel.

1 mile no. of Inspiration Point,
Cuyamaca Lake,
San Diego Co.
E.R.Johnson 17 April 1929

H-1298

Berberis californica Jepson.

½ mile so. of Inspiration Point,
Cuyamaca Lake,
San Diego Co.
E.R. Johnson 17 April 1929

H-1299

Viola douglasii Steud.

Cuyamaca Lake,
San Diego Co.
E.R. Johnson 17 April 1929

H-1300

Cornus californica C.A. Mey.

5 miles so. of Cuyamaca Lake,
San Diego Co.
E.R. Johnson 17 April 1929

H-1301

Arctostaphylos pungens H.B.K.

1½ miles so. of Inspiration Point,
Cuyamaca Lake,
San Diego Co.
E.R. Johnson 17 April 1929

H-1302

Arctostaphylos tomentosa Lindl.

1½ miles so. of Inspiration Point,
Cuyamaca Lake,
San Diego Co.
E.R. Johnson 17 April 1929

H-1303

Arctostaphylos pungens H.B.K.

Mistletoe Lodge, Cuyamaca Lake,
San Diego Co.
E.R. Johnson 17 April 1929

H-1304

Ribes malvaceum indecorum Jancz.

10 miles so. of Cuyamaca Lake,
San Diego Co.
E.R. Johnson 17 April 1929

H-1305

Arctostaphylos canescens Eastw.

near head of La Posta Creek,
San Diego Co.
E.R. Johnson 17 April 1929

H-1306

Diplacus puniceus Nutt.

San Mateo Creek Bridge,
San Diego Co.
E.R.Johnson 17 April 1929

H-1307

Mimulus guttatus DC.

San Mateo Creek,
San Diego Co.
E.R.Johnson 17 April 1929

H-1308

Verbena prostrata R. Br.

San Mateo Creek,
San Diego Co.
E.R. Johnson- 17 April 1929

H-1309

Nolina bigelovii (Torr.) Wats.

6 miles below Jacumba,
San Diego Co.
E.R. Johnson 17 April 1929

H-1310

Pinus cembroides parryana (Engelm.) Voss.

1 mile no. of Boulevard,
San Diego Co.
E.R. Johnson 17 April 1929

H-1311

Purshia glandulosa Curran.

5 miles below Jacumba,
San Diego Co.
E.R. Johnson 17 April 1929

H-1312

Stenotopsis linearifolius interior McBr.
summit of Mountain Springs Grade,
San Diego Co.
E.R. Johnson 17 April 1929

H-1313

Chamaebatia foliolosa australis Bdg.
Potrero Grade, under Mt. Tecate,
San Diego Co.
E.R. Johnson 17 April 1929

H-1314

Berberis californica Jepsm.

1 mile down old Banner Grade,
San Diego Co.
E.R. Johnson 17 April, 1929

H-1315

Delphinium cardinale Hook.

Old Banner Grade,
San Diego Co.
E.R. Johnson 17 April 1929

H-1316

Cercis occidentalis Torr.

1 mile down Old Banner Grade,
San Diego Co.
E.R. Johnson 17 April 1929

H-1317

Libocedrus decurrens Torr.

City Creek Road, San Bernardino Mts.,
San Bernardino Co. 5000 ft.
E.R. Johnson 30 June 1929

H-1318

Apocynum androsaemifolium pumilum Gray

City Creek Road, San Bernardino Mts.,
San Bernardino Co. 5000 ft.
E.R. Johnson 30 June 1929

H-1319

Gilia

City Creek Road, San Bernardino Mts.,
San Bernardino Co. 5000 ft.
E.R. Johnson 30 June 1929

H-1320

Lotus

along City Creek Road, San Bernardino
Mts. 5000 ft ?.
San Bernardino Co.
E.R. Johnson 30 June 1929

H-1321

Eriophyllum

City Creek Road, San Bernardino Mts.,
San Bernardino Co. 6000 ft.
E.R. Johnson 30 June 1929

H-1322

Iris hartwegi australis Parish.

open woods, City Creek Road, San
Bernardino Mts. 4500 ft.
San Bernardino Co.
E.R. Johnson 30 June 1929

H-1323

Calyptridium umbellatum (Tour.) Greene

City Creek Road, San Bernardino Mts.
San Bernardino Co. 4500 ft.
E.R. Johnson 30 June 1929

H-1324

Trichostema lanatum denudatum Gray.

1 mile above Dutch John's, City
Creek Road, San Bernardino Mts.,
San Bernardino Co. 4000 ft.
E.R. Johnson 30 June 1929

H-1325

Antirrhinum glandulosum Lindl.

½ mile above Dutch John's,
San Bernardino Mts.,
San Bernardino Co. 3500 ft.
E.R. Johnson 30 June 1929

H-1326

Clarkia rhomboidea Douglas.

City Creek Road, above Dutch John's,
San Bernardino Mts.
San Bernardino Co.
E.R. Johnson 30 June 1929

H-1327

streptanthus

Deep Creek Cutoff, San Bernardino Mts.
San Bernardino Co.
E.R. Johnson 30 June 1929

H-1328

Eriodictyon trichocalyx Heller.

Deep Creek Cutoff, San Bernardino Mts.
San Bernardino Co.
E.R. Johnson 30 June 1929

H-1329

Pickeringia montana Nutt.

3 miles above Barrel Springs, San
Bernardino Mts.
San Bernardino Co. 5000ft.
E.R. Johnson 30 June 1929

H-1330

Rubus parviflorus nutt.

Deep Creek, San Bernardino Mts.
San Bernardino Co. 6000ft.
E.R. Johnson 30 June 1929

H-1331

Cornus californica C.A. Mey.

stream beds, Deep Creek, San
Bernardino Mts.
San Bernardino Co. 6000 ft.
E.R. Johnson 30 June 1929

H-1332

Lupinus

City Creek Road, San Bernardino Mts.
San Bernardino Co. 6000 ft.
E. R. Johnson 30 June 1929

H-1333

Apocynum androsaemifolium pumilum
Gray.

Bear Valley Dam, San Bernardino Mts.
San Bernardino Co. 6700 ft
E.R. Johnson 30 June 1929

H-1334

Ribes nevadense Kellogg.

stream banks, Bear Valley, San
Bernardino Mts.
San Bernardino Co. 6700 ft.
E. R. Johnson 30 June 1929

H-1335

Lotus

stream banks, Bear Valley, San
Bernardino Mts.
San Bernardino Co. 6700ft.
E.R. Johnson 30 June 1929

H-1336

Ribes cereum douglas.

Bear Valley, San Bernardino Mts.
San Bernardino Co. 6700
E.R. Johnson 30 June 1929

H-1337

Pentstemon

Bear Valley, San Bernardino Mts.
San BernardinO Co. 6700 ft.
E.R. Johnson 30 June 1929

H-1338

Amelanchier alnifolia nutt.

Bear Valley Dam, San Bernardino Mts.
San Bernardino Co. 6700 ft
E.R. Johnson 30 June 1929

H-1339

Castanopsis sempervirens Dudley

Bear Valley, San Bernardino Mts.
San Bernardino Co. 6700
E.R. Johnson 30 June 1929

H-1340

Pentstemon

Bear Valley, San Bernardino Mts.
San Bernardino Co. 6700 ft.
E.R. Johnson 30 June 1929

H-1341

Iris missouriensis Nuttall

swampy meadows, Bear Valley,
San Bernardino Mts. 6700 ft.
San Bernardino Co.
E.R. Johnson, 30 June 1929

H-1342

Leptodactylon pungens tenuilobum
(Parish) Jepson

rocks around Bear Valley Dam,
San Bernardino Mts.
San Bernardino Co. 6700 ft
E.R. Johnson 30 June 1929

H-1343

Holodiscus discolor dumosus (nutt) maxim.

rocks around Bear Valley Dam,
San Bernardino Mts.
San Bernardino Co. 6700 ft
E.R. Johnson 30 June 1929

H-1344

Solanum xantii gray.

Bear Valley Dam, San Bernardino Mts.
San Bernardino Co. 6700 ft
E.R. Johnson 30 June 1929

H-1345

Viguiera F laciniata Gray. G-548

Spring Valley, San Diego Co.
Johnson & Stark 11 July 1929

H-1346 G-549

Sphaeralcea densiflora (Wats.) Jepson.

1 mile east of Jamul,
San Diego Co.
Johnson & Stark 11 July 1929

H-1347 G-550

Ceanothus

San Diego Co.
Johnson & Stark 11 July 1929

H-1348 G-551

Ceanothus

San Diego Co.
Johnson & Stark 11 July 1929

H-1349 G-552

Pentstemon ternatus Gray.

San Diego Co.
Johnson & Stark 11 July 1929

H-1350 G-553

Ceanothus cuneatus Nutt.

San Diego Co.
Johnson & Stark 11 July 1929

H-1351 G-554

Berberis fremontii Torr.

Boulevard, San Diego Co.
Johnson & Stark 12 July 1929

H-1352 G-555

Pentstemon centranthifolius Benth.

1½ miles west of Boulevard,
San Diego Co.
Johnson & Stark 12 July 1929

H-1353 G-556

Ceanothus

Cuyamaca Dam,
San Diego Co.
Johnson & Stark 12 July 1929

H-1354 G-557

Ceanothus austromontanus Abrams

Inspiration Point, Cuyamaca Lake,
San Diego Co.
Johnson & Stark 12 July 1929

H-1355 G-558

Ribes roezlii Regel.

1 mile south of Inspiration Point,
Cuyamaca Lake,
San Diego Co.
Johnson & Stark 12 July 1929

H-1356 G-559

Cercis occidentalis Torr.

Old Banner Grade,
San Diego Co.
Johnson & Stark 12 July 1929

H-1357 G-560

Ceanothus

Banner Grade,
San Diego Co.
Johnson & Stark 12 July 1929

H-1358

Berberis californica Hpsm.

Old Banner Grade,
San Diego Co.
Johnson & Stark 12 July 1929

H-1359

Aquilegia truncata J.M.M.

Cuyamaca Mts.,
San Diego Co.
Johnson & Stark 12 July 1929

H-1360 G-562

Ceanothus spinosus Nutt.
4-6 ft. det. N.E. McMinn.
San Ysidro,
Santa Barbara Co.
B.D.Stark 15 July 1929

H-1361 G-563

Ceanothus macrocarpus Nutt.
6-19 ft. Det. H.E. McMinn.
San Ysidro,
Santa Barbara Co.
B.D. Stark 15 July 1929

H-1362 G-564

Ceanothus ligonthus Nutt.
5 ft. Det. H.E. McMinn.
Canyon west of San Ysidro,
Santa Barbara Co.
B.D. Stark 15 July 1929

H-1363 G-565

Ceanothus ligonthus Nutt.
6-10 ft. Det. H.E. McMinn
Mission Canyon, Santa Barbara,
Santa Barbara Co. 1000 ft.
B.D. Stark 16 July 1929

H-1364 G-566

Arctostaphylos

5 miles so. of Arroyo Grande,
San Luis Obispo Co. 200 ft.
B.D. Stark 16 July 1929

H-1365 G-567

Ceanothus impressus Trel.
6-10 ft. Det. H.E. McMinn.
5 miles so. of Arroyo Grande,
San Luis Obispo Co. 200 ft.
B.D. Stark 16 July 1929

H-1366 G-568

Ceanothus cuneatus (Hook) Nutt.
4-6 ft. Variation typical for this region
Det. H.E. McMinn

5 miles so. of Arroyo Grande,
San Luis Obispo Co. El. 200 ft.
B.D. Stark 16 July 1929

H-1367 G-569

Ceanothus divaricatus Nutt.
14 ft. minor variation IV McMinn. Det. H.E. McMinn

2 miles so. of Atascadero,
San Luis Obispo Co. 850 ft.
B.D. Stark 16 July 1929

H-1368 G-570

Arctostaphylos pumila Nutt.

sand hills, Monterey,
Monterey Co.
B.D. Stark 17 July 1929

H-1369 G-571

Ceanothus rigidus Nutt.
2½ ft. Det. H.E. McMinn.

1.6 miles no. of Monterey, in sand,
Monterey Co. El. 100 ft.
B.D. Stark 17 July 1929

H-1370 G-572

Echinocystis fabacea Naud.

2 miles no. of Monterey,
Monterey Co. 100 ft.
B.D.Stark 17 July 1929

H-1371 G-573

Ceanothus

2½ miles so. of Monterey,
Monterey Co.
B.D. Stark 17 July 1929

H-1372 G-574

Corylus rostrata californica A.DC.
3-10 ft.
Aftan Acres,
Santa Cruz Co.
B.D. Stark 17 July 1929

H-1373 G-575

Ceanothus thyrsiflorus Esch. Det. H.E. McMinn.
30 ft.
3½ miles so. of Scott Valley School,
Santa Cruz Co. 400 ft.
B.D. Stark 17 July 1929

H-1374 G-576

Ceanothus incanus Torr. & Gray.
6-8 ft. Det. H.E. McMinn.
½ mile so. of Scott Valley School,
Santa Cruz Co. 400 ft.
B.D. Stark 17 July 1929

H-1375 G-577

Physocarpus capitatus (Pursh) Ktze.
3-4 ft.
Strawberry Canyon, Berkeley,
Alameda Co. 500 ft.
B.D. Stark 19 July 1929

H-1376 G-578

Ceanothus sorediatus Hook. & Arn.
4-6 ft. det. H.E. McMinn.
Strawberry Canyon, Berkeley,
Alameda Co. 500 ft.
B.D. Stark 19 July 1929

H-1377 G-579

Vicia gigantea Hook.

Strawberry Canyon, Berkeley,
Alameda Co. 19 July 1929
B.D. Stark 500 ft.

H-1378 G-580

Lathyrus polyphyllus nutt.

Strawberry Canyon, Berkeley,
Alameda Co. 500 ft.
B.D. Stark 19 July 1929

H-1379 G-581

Ceanothus foliosus Parry
1-3 ft. det. H.E. McMinn.
Muir Woods,
Marin Co. 500 ft.
B.D. Stark 22 July 1929

H-1380 G-582

Ceanothus integerrimus Hook. & Arn.
6-8 ft. det. H.E. McMinn.
Highway, near Mendocino- Sonoma Co.
line,
Sonoma Co.
B.D. Stark 22 July 1929

H-1381 G-583

Ceanothus jepsoni Greene
2-8 ft. det. H E. McMinn.
along highway, near Mendocino Co. line,
Sonoma Co.
B.D. Stark 22 July 1929

H-1382 G-584

Ceanothus cuneatus (Hook.) Nutt.
4-8 ft. det. H E. McMinn.
along highway, near Mendocino Co. line,
Sonoma Co.
B.D. Stark 22 July 1929

(For G-585 see H1658 →)

H-1383 G-586

Ceanothus thyrsiflorus Esch.
4-8 ft. det. H E McMinn.
2 miles no. of Albion,
Mendocino Co. 100 ft
B.D. Stark 23 July 1929

H-1384 G-587

Ceanothus thyrsiflorus griseus Trel.
6-18 ft. det. H E. McMinn.
Harold St., Mendocino City,
Mendocino Co. Ab. 25 ft.
B.D. Stark 23 July 1929

H-1385 G-588

Ceanothus foliosus Parry
4-6 ft. minor variation I. McMinn
Redwood Highway, so. fork of Eel River,
1 mile from road to Rockport,
Mendocino Co.
B.D. Stark 23 July 1929

det. H E McMinn

H-1386 G-589

Ceanothus Velutinus laevigatus Torr. & Gray
10-35 ft. seed. H.E. McMinn.

Mendocino Co.
B.D. Stark 23 July 1929

H-1387 G-590

Lonicera involucrata ledebourii (Esch.) Jepson
10 ft.
8 miles so. of Eureka,
Humboldt Co. 100 ft.
B.D. Stark 24 July 1929

H-1388 G-591

Sambucus racemosa callicarpa (Greene) Jepson

2 miles no. of Arcata,
Humboldt Co. 100 ft.
B.D. Stark 24 July 1929

H-1389 G-592

Vaccinium parvifolium Sm.
10 ft.
north fork of Smith River,
Del Norte Co. 500 ft.
B.D. Stark 24 July 1929

H-1390 G-593

Purshia tridentata DC.
4-6 ft.
2 miles no. of Sawyer's Camp, Klamath River,
Siskiyou Co. 500 ft.
B.D. Stark 25 July 1929

H-1391 G-594

Ceanothus cuneatus (Hook) Nutt.
4-8 ft. det. H.E. McMinn.
2 miles so. of Yreka, 2600 ft.
Siskiyou Co.
B.D. Stark 25 July 1929

H-1392 G-595

Ceanothus ~~cuneatus (Hook) Nutt.~~ cordulatus Kellogg
1-3 ft. det. H.E. McMinn.
8 miles no. of Dunsmuir, 2000 ft.
Siskiyou Co.
B.D. Stark 25 July 1929

H-1393 G-596

Ceanothus lemmonii Parry
3 ft. det. H.E. McMinn.
1 mile so. of Dunsmuir, 2200 ft.
Siskiyou Co.
B.D. Stark 25 July 1929

H-1394 G-597

Ceanothus integerrimus pedunculatus
3-8 ft. det. H.E. McMinn. Jepson
5 miles no. of Baird, 500 ft.
Shasta Co.
B.D. Stark 25 July 1929

H-1395 G-598

Ceanothus integerrimus Hook & Arn.
3-8 ft det. H.E. McMinn.
Paradise,
Butte Co.
B.D. Stark 26 July 1929

H-1396 G-599

Ceanothus lemmoni Parry
1-3 ft. Det H.E. McMinn.
1½ miles so. of Paradise,
Butte Co.
B.D. Stark 26 July 1929

H-1397 G-600

Ceanothus divaricatus Nutt.
4-12 ft. Det. H.E. McMinn.
road to Indians,
Monterey Co.
B.D. Stark 29 July 1929

H-1398 G-601

Ceanothus papillosus Torrey & Gray
4-10 ft. minor variation II McMinn
showing relationship to C. dentatus
Camp Lucia, Det. H.E. McMinn
Monterey Co.
B.D. Stark 29 July 1929

H-1399 G-602

Ceanothus papillosus var regius Jepson
Hybrid = C. papillosus x C. thyrsiflorus ?
Camp Lucia, Det. H.E. McMinn.
Monterey Co.
B.D. Stark 29 July 1929

H-1400 G-603

Ceanothus divaricatus Nutt.
4-8 ft. Det. H.E. McMinn.
Camp Lucia,
Monterey Co.
B.D. Stark 29 July 1929

H-1401 G-604

Ceanothus integerrimus H. & A. var.
4-8 ft. det. H.E. McMinn.
Camp Lucia,
Monterey Co.
B.D. Stark 29 July 1929

H-1402 G-606

Ceanothus thyrsiflorus Eschs.
6-12 ft. Det. H.E. McMinn.
above Muir Woods, 500 ft.
Marin Co.
B.D. Stark 22 July 1929

H-1403 G-608

Ceanothus spinosus nutt.
6-8 ft. det. H.E. McMinn.
Seminole Hot Springs,
Los Angeles Co.
B.D. Stark 25 Aug. 1929

H-1404

Lysichiton kamtschatence (L.) Schott.

west of Fort Bragg Camp Grounds,
Fort Bragg,
Mendocino Co. 50 ft.
E.R. Johnson Aug. 1929

H-1405 G-615

Ribes menziesii Pursh.

5 miles above Blue Lake, on road to
Willow Creek,
Humboldt Co. 500 ft.
E.R. Johnson Aug. 1929

H-1406 G-618

Berberis nervosa Pursh

7 miles east of Arcata on the road to Willow Creek, 250 ft ?
Humboldt Co.
E.R. Johnson Aug. 1929

H-1407

Anaphalis margaritacea (L.) B. & H.

Arcata Redwood Park,
Humboldt Co. 250 ft.
E.R. Johnson Aug. 1929

H-1408

Arcata

Arcata Redwood Park,
Humboldt Co. 250 ft.
E.R. Johnson Aug. 1929

H-1409

Arcata Redwood Park,
Humboldt Co. 250 ft.
E.R. Johnson Aug. 1929

H-1410

Rhamnus purshiana DC.

Arcata Redwood Park,
Humboldt Co. 250 ft.
E.R. Johnson Aug. 1929

H-1411

Arcata Redwood Park,
Humboldt Co. 250 ft.
E.R. Johnson Aug. 1929

H-1412 G-620

Vaccinium parvifolium Sm.

Arcata Redwood Camp,
Humboldt Co. 300 ft.
E.R. Johnson Aug. 1929

H-1413 ~~G-617~~

Ribes sanguineum glutinosum Loud.

Arcata Redwood Park,
Humboldt Co. 250 ft.
E.R. Johnson Aug. 1929

Plants in nursery under this no. are different species etc.

H-1414

Disporum

Arcata Redwood Park,
Humboldt Co. 250 ft.
E.R. Johnson Aug. 1929

H-1415 G-612

Gaultheria shallon Pursh

Arcata Redwood Park,
Humboldt Co. 250 ft.
E.R. Johnson Aug. 1929

H-1416 G-621

Rubus parviflorus Nutt.

Arcata Redwood Park,
Humboldt Co. 250 ft.
E.R. Johnson Aug. 1929

H-1417 G-614

Ribes sanguineum glutinosum Loud.

Arcata Redwood Park,
Humboldt Co. 250 ft.
E.R. Johnson Aug. 1929

Plants in the nursery under this no. are a different collection.

H-1418 G-619

Vaccinium ovatum Pursh

Lanes Redwood Flat,
Mendocino Co. 400 ft.
E.R. Johnson Aug. 1929

H-1419

Quercus lobata Nee.

Junction of Fort Bragg and Redwood Highway, no. of Cloverdale.
Mendocino Co.
E.R. Johnson Aug. 1929

H-1420

Arceuthobium campylopodum Engelm.

on Pinus muricata,
Pine Barrens near Fort Bragg.
Mendocino Co. 100 ft.
E.R. Johnson Aug. 1929

H-1421

Quercus durata Jepson

pass north of Cloverdale,
Mendocino Co.
E.R. Johnson Aug. 1929

H-1422

Quercus wislizenii A.DC.

north side of Pass on road Cloverdale
to Hopland,
Mendocino Co.
E.R. Johnson Aug. 1929

H-1423

Alnus rhombifolia Nutt.

Lanes Redwood Flat,
Mendocino Co. 400ft.
E.R. Johnson Aug. 1929

H-1424 G-610

Corylus rostrata californica A.DC.

Stephens Grove, Redwood Highway,
Humboldt Co.
E.R. Johnson Aug. 1929

H-1425 G-623

Myrica californica Cham.

Fort Bragg Camp Grounds, Fort Bragg,
Mendocino Co. 50 ft.
E.R. Johnson Aug. 1929

H-1426

Quercus wislizenii A.DC.

Between Hopland and Lakeport,
Lake Co.
E.R. Johnson Aug. 1929

H-1427

Quercus dumosa Nutt.

Between Hopland and Lakeport,
Lake Co.
E.R. Johnson Aug. 1929

H-1428

Quercus lobata Nee.

north side of pass on road from
Cloverdale to Hopland.
Mendocino Co. Aug. 1929

H-1429 G-639

Torreya californica Torr.

Between Hopland and Kelseyville,
Lake Co.
E.R. Johnson Aug. 1929

H-1430

Rhamnus californica Esch.

pass north of Cloverdale,
Mendocino Co.
E.R. Johnson Aug. 1929

H-1431

Helenium puberulum DC.

along the Redwood Highway, so. of Eureka, 100 ft.
Humboldt Co.
E.R. Johnson Aug. 1929

H-1432 G-622

Cornus nuttallii Aud.

Along the Eel River,
Humboldt Co. 300 ft.
E.R. Johnson Aug. 1929

H-1433 G-616

Aralia californica Watson.

5 miles so. of Weott,
Humboldt Co.
E.R. Johnson Aug. 1929

H-1434 genista
~~Cytisus~~

Along the Eel River,
Humboldt Co. 300 ft.
E.R. Johnson Aug. 1929

H-1435

Trichostema laxum Gray.

along the Eel River,
Humboldt Co.
E.R. Johnson Aug. 1929

H-1436

Sequoia sempervirens Endl.

Pacific Lumber Co., along the Eel River, Dyerville,
Humboldt Co.
E.R. Johnson Aug. 1929

H-1437

Zauschneria

Eel River,
Humboldt Co. 300 ft
E.R. Johnson Aug.1929

H-1438 G-626

Fraxinus velutina Torr.

Keys Ranch, near 29 Palms, mojave desert.
Riverside Co.
B.D. Stark 22 Sept. 1929

H-1439 G-633

Styrax officinalis californica M.+J.
1 mile above. Dutch Johns. City Creek Rd.
San Bernardino Co. 4000 ft.
E.R. Johnson 29 Sept. 1929

H-1440 G-636

Amorpha californica Nutt. ok.

Rancho Santa Ana, 500 ft.
Orange Co.
E.R. Johnson 1 Oct. 1929

H-1441 G-650

Senecio douglasii DC.

river bottom, Rancho Santa Ana,
Orange Co. 400 ft.
B.D. Stark 2 Nov. 1929

H-1442 G-651

Bebbia juncea (Benth.) Greene

along railroad track, Rancho Santa Ana,
Orange Co. 500 ft.
B.D. Stark 2 Nov. 1929

H-1443 G-657

Diplacus puniceus Nutt.

Torrey Pines Park, 100 ft.
San Diego Co.
B.D. Stark 20 Dec. 1929

H-1444 G-658

Eriodictyon crassifolium Benth.

Torrey Pines Park, 100 ft.
San Diego Co.
B.D. Stark 20 Dec. 1929

H-1445

Ceanothus

Torrey Pines Park,
San Diego Co. 100 ft.
B.D. Stark 20 Dec. 1929

H-1446 G-659

Comarostaphylis diversifolia Greene.

10-12 ft.

Santa Fe Ranch,
San Diego Co. 150 ft.
B.D. Stark 20 Dec. 1929

H-1447 G-662

Sphaeralcea fasciculata (Nutt.) Arthur

Torrey Pines Park,
San Diego Co. 500 ft.
B.D. Stark 21 Dec. 1929

H-1448 G-665

Arctostaphylos bicolor (Nutt.) Gray

2-10 ft.

Santa Fe Ranch, 150 ft.
San Diego Co.
B.D. Stark 20 Dec. 1929

H-1449 G-668

Viguiera laciniata Gray

4 miles so. of La Mesa,
San Diego Co. 500 ft.
B.D. Stark 26 Dec. 1929

H-1450 G-669

Hymenoclea monogyra Torr. & Gray

6-10 ft high.

3 miles so. of Jamul,
San Diego Co. 1000 ft.
B.D. Stark 26 Dec. 1929

H-1451 G-670

Chamaebatia foliolosa australis Bdg.

10 miles so. of Dulzura,
San Diego Co. 1500 ft.
B.D. Stark 26 Dec, 1929

H-1452 G-671

Artemisia tridentata Nutt.

Campo,
San Diego Co. 2600 ft.
B.D. Stark 27 Dec. 1929

H-1453 G-676

Alnus rhombifolia Nutt.

Cuyamaca Mts.,
San Diego Co.
B.D. Stark 27 Dec. 1929

end 1924

H-1454

Lathyrus alefeldi White

Middle Ranch Canyon,
Catalina Island.
Knopf & Johnson 30 Jan. 1930

H-1455 G-691

Quercus tomentella Engelm.

Pebble Beach Canyon.
north slope,
Catalina Island.
Knopf & Johnson 29 Jan. 1930

H-1456 G-693

Vitis girdiana Munson
mouth of Cottonwood canyon, el 200 ft.
Catalina Island,
Knopf & Johnson 30 Jan. 1930

H-1457 G-694

Photinia arbutifolia Lindl.

north slope canyon, Cherry Valley.
Catalina Island,
Knopf & Johnson 1 Feb. 1930

H-1458 G-695

Photinia arbutifolia cerina Jepson
Avalon Canyon.
Catalina Island,
Knopf & Johnson 30 Jan. 1930

H-1459 G-698

Rhamnus
middle Ranch Canyon.
Catalina Island,
Knopf & Johnson 30 Jan. 1930

H-1460

no specimens under this number.

H-1461

no specimens under this number.

H-1462 G-699

Cercocarpus alnifolia Rydb.
head of Descanso Canyon, 1000 ft.
Catalina Island,
Knopf & Johnson 30 Jan. 1930

H-1463 G-700

Arctostaphylos tomentosa Lindl.

Catalina Island,
Knopf & Johnson 30 Jan. 1930

H-1464 G-705

Ribes viburnifolium A.Gray
Cherry Valley
near Isthmus Harbor, Catalina Island,
Knopf & Johnson 1 Feb. 1930

H-1465

no specimens under this number.

H-1466 G-707

Baccharis pilularis DC.

4-8 ft high

near Little Harbor, Catalina Island 100 ft.

Knopf & Johnson 1 Feb. 1930

H-1467

no specimens under this number.

H-1468 G-720

Bebbia juncea(Benth.) Greene

Hidden Canyon, near Corona, Riverside Co.

B.D. Stark 21 Feb. 1930

H-1469 G-721

Ribes malvaceum Sm var ? understood ?

styles glabrous!

Hidden Canyon, near Corona, Riverside Co.

B.D. Stark 21 Feb. 1930

H-1470 G-722

Ribes californicum hesperium (McC)

Jepson.

Hidden Canyon, near Corona, Riverside Co.

Santa Ana mts.

B.D. Stark 21 Feb. 1930

H-1471

no specimens under this number.

H-1472

Arctostaphylos glauca Lindl.

Hidden Canyon, near Corona,
Riverside Co.
B.D. Stark 21 Feb. 1930

H-1473

Ceanothus crassifolius Torr.

Hidden Canyon, near Corona,
Riverside Co.
B.D. Stark 21 Feb. 1930

H-1474

Acer macrophyllum Pursh

Hidden Canyon, near Corona,
Riverside Co.
B.D. Stark 21 Feb. 1930

H-1475 G-723

Ribes malvaceum indecorum Jones.

Black Star Creek, 1500 ft.
Orange Co.
B.D. Stark 21 Feb. 1930

H-1476

no specimens listed under this number.

H-1477 G-724

Tetradymia comosa Gray.

Hidden Canyon, near Corona,
Riverside Co.
B.D. Stark 21 Feb. 1930

H-1478 G-735

Ribes roezlii Regel.

Nigger Monument, Palomar Mt.
San Diego Co.
B.D. Stark 27 Feb. 1930

H-1479

Cneoridium dumosum Hook.

along inland route to San Diego at
Riverside - San Diego Co. line.
San Diego Co.
B.D. Stark 27 Feb. 1930

H-1480 G-744

Encelia ~~farinosa Gray~~ actoni Elmer.

Warners Hot Springs,
San Diego Co.
B.D. Stark 4 March 1930

H-1481 G-746

Ribes quercetorum Greene.

north of Warners Hot Springs,
San Diego Co.
B.D. Stark 4 March 1930

H-1482 G-747

Lycium torreyi wrightii (Gray) Jepson.

North of Warners Hot Springs,
San Diego Co.
B. D. Stark 4 March 1930

H-1483 G-748

Atriplex canescens James.

north of Warners Hot Springs,
San Diego Co.
B.D. Stark 4 March 1930

H-1484 G-750

Quercus engelmannii Greene
23-30 ft.
5 miles so. of Fallbrook,
San Diego Co. 800 ft.
B.D. Stark 4 March 1930

H-1485 G-751

Lycium torreyi wrightii (Gray) Jepson.

Mocking-bird Canyon Dam,
Riverside Co. 1200 ft
B.D. Stark 17 March 1930

H-1486 G-752

Atriplex canescens James.

Mockingbird Canyon Dam,
Riverside Co.
B.D. Stark 17 March 1930

H-1486-A G-753

Forestiera neo-mexicana Gray

Cajales District,
Riverside Co.
B.D. Stark 17 March 1930

H-1487 3 sheets mounted. G-758

Ribes ~~cereum~~ malvaceum indecorum Jancz.

A=White
B=Pink
C=Deep Pink.
C.B.W.

½ way up the west side of Mt. San Jacinto, Riverside Co.
B.D. Stark 18 March 1930

H-1488 G-761

Arctostaphylos pungens H.B.K.

south Keen Camp, San Jacinto Mts.,
Riverside Co.
B.D. Stark 18 March 1930

H-1489 G-762

Sambucus glauca Nutt. 10-1-2 M

Cajales District, Riverside Co.
B.D. Stark 18 March 1930

H-1490

Garrya veatchii Kellogg.

Mt. San Jacinto, Riverside Co.
B.D. Stark 18 March 1930

H-1491 G-772

Acamptopappus sphaerocephalus Gray

1-2 ft high

Devils Garden,
Riverside Co.
B.D. Stark 1 April 1930

H-1492 G-773

Franseria dumosa Gray

1-2 ft high.

San Gorgonio Pass, 1500 ft.
Riverside Co.
B.D. Stark 1 April 1930

H-1493 G-775

Hymenoclea salsola Torr. & Gray

2-2½ ft high.

Devils Garden,
Riverside Co.
B.D. Stark 1 April 1930

H-1494 G-776

Larrea tridentata glutinosa (Rydb.) Jepson

San Gorgonio Pass, 1500 ft.
Riverside Co.
B.D. Stark 1 April 1930

H-1495 G-777

Isocoma veneta acradenia (greene) Hall.

San Gorgonio Pass, 1500 ft.
Riverside Co.
B.D. Stark 1 April 1930

H-1496 G-778

Krameria canescens Gray

San Gorgonio Pass,
Riverside Co. 1500 ft
B.D. Stark 1 April 1930

H-1497 G-779

Atriplex ~~lentiformis~~ polycarpa (Torr.) Watson.

Cathedral City,
Riverside Co.
B.D. Stark 1 April 1930

H-1498 G-780

Hyptis emoryi Torr.

6-8 ft.
near Cathedral City,
Riverside Co.
B.D. Stark 1 April 1930

H-1499 G-782

Atriplex ~~polycarpa~~ lentiformis (Torr.) Wats.

Indio, sea Level
Riverside Co.
B.D. Stark 2 April 1930

H-1500 G-783

Atriplex ~~lentiformis~~ polycarpa (Torr.) Wats.

Indio, sea Level.
Riverside Co.
B.D. Stark 2 April 1930

H-1501 G-784

Parosela emoryi (Gray) Heller.

west of Indio,
Riverside Co. sea level.
B.D. Stark 2 April 1930

H-1502

Trixis californica Kellogg.

Santa Rosa Mts., between Indio &
Palm Springs,
Riverside Co.
B.D. Stark 2 April 1930

H-1503 G-785

Viguiera deltoidea parishii (Greene) Rose

White Water Bridge, San Gorgonio Pass.
Riverside Co. 1500 ft.
B.D. Stark 2 April 1930

H-1504 G-790

Styrax officinalis californica M.&J.
6-10 ft

1 mile above Dutch Johns, City Creek
Road, San Bernardino Mts.,
San Bernardino Co.
B.D. Stark 9 April 1930

H-1505 G-791

Pickeringia montana Nutt.
2-3 ft.

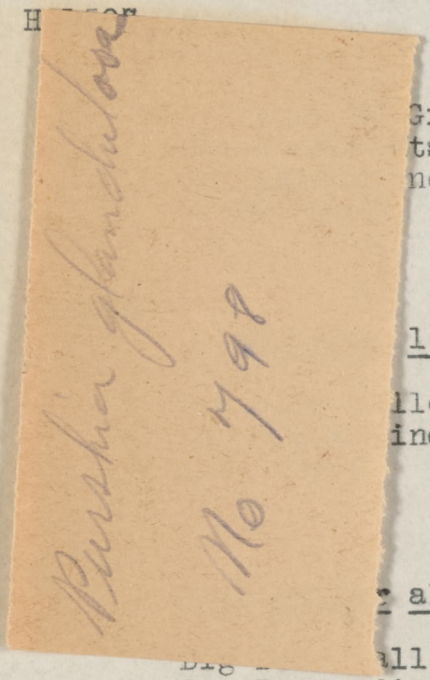
1 mile above Barrel Springs,
San Bernardino Co.
B.D. Stark 9 April 1930

H-1506 G-793

Ribes nevadense Kellogg.

City Creek at entrance to Smiley Park,
San Bernardino Co.
B.D. Stark 9 April 1930

H [illegible]



Green Valley, San
ts.,
no Co.
9 April 1930

G-796

ledifolius Nutt.

lley, San Bernardino Mts.,
ino Co. 7000 ft.
10 April 1930

G-797

alnifolia Nutt.

alley, San Bernardino Mts.,
San Bernardino Co. 7000 ft.
B.D. Stark 10 April 1930

H-1510 G-798

Purshia glandulosa Curran

8 ft
Fish hatchery above Baldwin Lake,
San Bernardino Mts., 6500 ft.
San Bernardino Co.
B.D. Stark 10 April 1930

H-1506 G-793

Ribes nevadense Kellogg.

City Creek at entrance to Smiley Park,
San Bernardino Co.
B.D. Stark 9 April 1930

H-1507

Salix

entrance to Green Valley, San
Bernardino Mts.,
San Bernardino Co.
B. D. Stark 9 April 1930

H-1508 G-796

Cercocarpus ledifolius Nutt.

15ft.
Big Bear Valley, San Bernardino Mts.,
San Bernardino Co. 7000ft.
B.D. Stark 10 April 1930

H-1509 G-797

Amelanchier alnifolia Nutt.

Big Bear Valley, San Bernardino Mts.,
San Bernardino Co. 7000 ft.
B.D. Stark 10 April 1930

H-1510 G-798

Purshia glandulosa Curran

8ft
Fish hatchery above Baldwin Lake,
San Bernardino Mts., 6500 ft.
San Bernardino Co.
B.D. Stark 10 April 1930

1511-A = flowering sheet & same.

H-1511 Chrysothamnus viscidiflorus G-800
12-15 in. pumilus (nutt.) Hall
det. H.M. Hall.
Big Bear City, San Bernardino Mts.,
San Bernardino Co. 7000 ft.
B.D. Stark 10 April 1930

H-1512 G-801
Salvia carnosa compacta Hall

Fawnskin, San Bernardino Mts.,
San Bernardino Co.
B.D. Stark 10 April 1930

H-1513 Chrysothamnus nauseosus G-803
1-2½ ft. viridulus (Hall) Todd
det. H.M. Hall.
Baldwin Lake, San Bernardino Mts.,
San Bernardino Co., 6500 ft
B. D. Stark 10 April 1930

H-1514 G-804
Sambucus velutina D. & H.

west side of Bldwin Lake, San
Bernardino Mts.,
San Bernardino Co. 6500 ft.
B.D. Stark 11 April 1930

H-1515 ~~G-805~~
no specimens under this number.
~~Cactus Flats,~~
San Bernardino Co.
B.D. Stark ~~11 April 1930~~

H-1516 G-806

Stenotopsis linearifolius interior McBr.
1-2 ft high.

Cactus Flats,
San Bernardino Co.
B.S. Stark 11 April 1930

H-1517 G-805

Ericameria cuneata spathulata (gray) Hall.

San Bernardino Co.
B.D. Stark 11 April 1930

H-1518 G-807

Salazaria mexicana Torr.

Cushenberry Grade, 4000 ft.
San Bernardino Co.
B.D. Stark 11 April 1930

H-1519 G-808

Coleogyne ramosissima Torr.
18-30 inches.
Cushenberry Grade, 4000 ft.
San Bernardino Co.
B.D. Stark 11 April 1930

H-1520 G-809

Salvia carnosa ~~compacta~~ pilosa ~~Hall~~ ( ) Jepson.

Cactus Flats,
San Bernardino Co.
B.D. Stark 11 April 1930

H-1521 G-810

Salvia carnosa compacta Hall

Whiskey Springs,
San Bernardino Co.
B.D. Stark 11 April 1930

H-1522 G-812

Salvia carnosa pilosa ( )
Jepson

Cushenberry Grade, 4000 ft.
San Bernardino Co.
B.D. Stark 11 April 1930

H-1523 G-813

Grayia spinosa (Hook.) Moq.

Desert floor at base of Cushenberry Grade, 3500 ft.
San Bernardino Co.
B.D. Stark 11 April 1930

H-1524 G-814

Stenotopsis linearifolius interior
1-2½ ft high McBr.
Between Victorville and Cajon Pass,
San Bernardino Co. 3500 ft.
B.D. Stark 29 April 1930

H-1525 G-816

Tetradymia spinosa H.H.

Between Victorville and Cajon Pass,
San Bernardino Co. 3500 ft.
B.D. Stark 29 April 1930

H-1526

Salazaria mexicana Torr.

4 miles so. of Victorville,
San Bernardino Co. 3500 ft.
B.D. Stark 29 April 1930

H-1527 Ericameria monactis (gray) McCl.

4 miles so. of Victorville,
San Bernardino Co. 3000 ft.
B.D. stark 29 April 1930

H-1528 G-817

Stenotopsis linearifolius interior McBr.
1-2½ ft.
Deadmans Point,
San Bernardino Co. 3000 ft.
B.D. Stark 29 April 1930

H-1529 G-818

Aster tortifolius Gray
1-1½ ft high
2 miles north of Deadmans Point,
San Bernardino Co. 3000 ft.
B.D. stark 29 April 1930

H-1530 G-819

Lepidium fremontii Wats.

2½ miles so. of Victorville,
San Bernardino Co. 3000 ft
B.D. Stark 30 April 1930

H-1531 G-820

Chrysothamnus nauseosus graphalodes (greene) Hall.

Victor Valley,
San Bernardino Co.
B.D. Stark 30 April 1930

H-1532 G-821

Chrysothamnus nauseosus [illegible].

Sheep Creek,
Los Angeles Co.
B. D. Stark 30 April 1930

H-1533 G-822

Berberis californica Jepson.

1½ miles so. of Wrightwood,
San Bernardino Co.
B.D. Stark 30 April 1930

H-1534 G-826

Salvia mohavensis Greene

"29 Palms",
San Bernardino Co.
B.D. Stark 4 May 1930

H-1534-A G-831

Brickellia atractyloides arguta (Rob.) Jepson
Morongo Pass, Riverside Co.
B.D. Stark 4 May 1930

H-1535 G-832

Salvia vaseyi ( )
Morongo Pass, Riverside Co.
B.D. Stark 4 May 1930

H-1536

Pentstemon centranthifolius Benth.

Dark Canyon,
Riverside Co.
B.D. Stark 4 May 1930

H-1537 G-834

Near Deadmans Point,
San Bernardino Co.
B.D. Stark 30 April 1930

H-1538

Escscholtzia glyptosperma Greene

near Death Valley Junction, Death Valley,
Inyo Co.
B.D. Stark 21 May 1930

H-1539

Castilleja

near Death Valley Junction, Death Valley,
Inyo Co.
B.D. Stark 21 May 1930

H-1540

Olneya tesota Gray

12 miles west of Blythe, near road,
Riverside Co.
B.D. Stark 25 May 1930

H-1541

Ceanothus palmeri Trelease.

Julian, Cuyamaca Mts.,
San Diego Co. 4200 ft.
B.D. Stark 12 July 1930

H-1542

Rhus laurina Nutt.

Mission Valley, 5 miles west of
Lakeside, 500 ft
San Diego Co.
B.D. Stark 7 Aug. 1930

H-1543

Rhus laurina Nutt.

Mission Valley, 5 miles west of
Lakeside, 500 ft
San Diego Co.
B.D. Stark 7 Aug. 1930

H-1544

Berberis fremontii Torrey

San Felipe Wash,
San Diego Co.
B.D. Stark 15 Aug. 1930

H-1545 G-889

Salvia vaseyi ( ) Jepson

Palm Canyon of San Ysidro,
San Diego Co.
B.D. Stark 15 Aug. 1930

H-1546 G-890

Martynia althaeafolia Benth.

Wylies Well, on the Niland to Blythe, Imperial Co. road
B.D. Stark 16 Aug. 1930

H-1547

Wylies Well, on the Niland to Blythe road,
Imperial Co.
B.D. Stark 16 Aug. 1930

H-1548 G-891

Petalonyx thurberi Gray

Chuckawalla Valley
Riverside Co.
B.D. Stark 17 Aug. 1930

H-1549 G-892

Asclepias

Box Canyon,
Riverside Co.
B.D. Stark 17 Aug. 1930

H-1550 G-893

Ceanothus cordulatus Kellogg.
2-3 ft. det. W.E. McMinn 5000 ft.
Grass Valley,
San Bernardino Co.
21 aug 1930 ? B.D. Stark ?.

H-1551 G-894

Amorpha Californica nutt.
3-5 ft.
Grass Valley, 5000 ft.
San Bernardino Co. S.B. mts.
B.D. Stark 21 Aug. 1930

H-1552 G-895

Castanopsis sempervirens Dudley

Grass Valley,
San Bernardino Co.
B.D. Stark 21 Aug. 1930

H-1553 G-896

Pinus lambertiana Dougl.

2 miles below Big Bear Dam,
San Bernardino Co.
B.D. Stark 21 Aug. 1930

H-1554 G-897

Sambucus velutina D. & H.

Below Big Bear Dam,
San Bernardino Co. 7000 ft.
B.D. Stark 21 Aug. 1930

H-1555 G-898

Pinus ponderosa jeffreyi (Murr.) Vasey

Below Big Bear Dam,
San Bernardino Co.
B.D. Stark 21 Aug. 1930

H-1556

Chrysothamnus viscidiflorus
sesuviflorus Hall.

southeast of Baldwin Lake, Big Bear Valley,
San Bernardino Co. 6500 ft.
B.D. Stark 21 Aug. 1930

H-1557

Chrysothamnus

south end of Baldwin Lake,
Big Bear Valley,
San Bernardino Co. 6500 ft.
B.D. Stark 21 Aug. 1930

H-1558 G-899

Fremontia californica Torr.

Johnson Grade,
San Bernardino Co.
B.D. Stark 21 Aug. 1930

H-1559 G-905

Rhamnus californica virida Jepson
(Rhamnus cuspidata Greene)
Canyon west of Tehachapi,
(Type locality for Greene's plant)
Kern Co. 4700 ft.
B.D. Stark 12 Sept. 1930

H-1560 G-906

Pinus sabiniana Dougl.

Bear Valley, Tehachapi Mts. ,
Kern Co.
B.D.Stark 12 Sept. 1930

H-1561 G-908

Rhamnus californica virida Jepson
(Rhamnus cuspidata Greene)

Forest Home,
San Bernardino Co.
B.D. Stark 5 Oct. 1930

H-1562 G-910

Arctostaphylos drupacea McBr.

Forest Home,
San Bernardino Co.
B.D. Stark 5 Oct. 1930

H-1563 G-912

Quercus wislizenii A.DC.

7 miles below Raymond, on the Raymond-Madera Road, 500 ft.
Madera Co.
E.R. Johnson 3 Oct. 1930

H-1564 G-914

Quercus wislizenii A.DC.

4½ miles above Raymond, 1000 ft.
Madera Co.
E.R. Johnson 4 Oct. 1930

H-1565 G-913

Quercus douglasii Hook. & Arn.

Raymond, campground, 1000 ft.
Madera Co.

E.R. Johnson 4 Oct. 1930

H-1566

Ericameria arborescens (Gray) Greene

5 miles up from Ahwahnee,
Madera Co. 2000 ft.
E.R. Johnson 4 Oct, 1930

H-1567 G-915

Torreya californica Torr.

Lower end of Yosemeite Valley,
Mariposa Co. 4000 ft.
E.R. Johnson 5 Oct. 1930

H-1568

Madia elegans

lo miles below El Portal,
Mariposa Co. 1500 ft
E.R. Johnson 5 Oct. 1930

H-1569 G-916

Pentstemon

Lower end of Yosemtie Valley,
Mariposa Co. 4000 ft.
E.R. Johnson 5 Oct. 1930

H-1570 G-917

Cephalanthus occidentalis L.

10 miles below El Portal,
Mariposa Co. 1500 ft
E.R. Johnson 5 Oct. 1930

H-1571

Wyethia elata Hall.

5 miles above Ahwahnee,
Madera Co.
E.R. Johnson 4 Oct. 1930

H-1572

Lessingia

Yosemite, 4000 ft.
Mariposa Co.
E.R. Johnson 5 Oct. 1930

H-1573 G-918

Taxus brevifolia Nutt.

Canyon Creek Above Dedrick,
Trinity Co. 4000 ft.
E.R. Johnson 14 Oct. 1930

H-1574 G-919

Arbutus menziesii Pursh.

Canyon Creek at end of road, 2 miles above Dedrick,
Trinity Co.
E.R. Johnson 15 Oct. 1930

H-1575 G-920

Aralia californica Wats.

Junction of Canyon Creek and Bear Creek,
Trinity Co. 4500 ft.
E.R. Johnson 15 Oct. 1930

H-1576

no specimens under this number.

H-1577 G-921

Prunus demissa (Nutt.) Dietr.

Canyon Creek Meadows,
Trinity Co. 5000 ft.
E.R. Johnson 13 Oct. 1930

H-1578 G-922

Sambucus velutina D. & H.

Canyon Creek Meadows,
Trinity Co. 5000 ft.
E.R. Johnson 14 Oct. 1930

H-1579 G-923

Populus tremuloides Michx.

¼ mile below Canyon Creek Lakes,
Trinity Co. 6000 ft.
E.R. Johnson 13 Oct. 1930

H-1580 G-924

Quercus vaccinifolia Engelm.

Hillsides above Canyon Creek Meadows,
Trinity Co. 7500 ft.
E.R. Johnson 13 Oct. 1930

H-1581 G-925

Alnus tenuifolia Nutt.

along the shore of lower lake,
Canyon Creek,
Trinity Co. 6000 ft.
E.R. Johnson 13 Oct. 1930

H-1582 G-926

Castanopsis chrysophylla (Dougl) A.DC.

Canyon Creek near Meadows
Trinity Co. 6000 ft.
E.R. Johnson 12 Oct. 1930

H-1583 G-927

Sorbus sitchensis Roem.

Canyon Creek Meadows,
Trinity Co. 4000 to 6000 ft.
E.R. Johnson 12 Oct. 1930

H-1584 G-928

Cornus sessilis Torrey

Gwyn Gulch, Canyon Creek,
Trinity Co. 5000 ft ?.
E.R. Johnson 14 Oct. 1930

H-1585 G-930

Rosa

in clover fields, Lowden Ranch,
3 miles so. of Lewiston,
Trinity Co. 1600 ft.
E.R. Johnson 17 Oct. 1930

H-1586 G-931

Acer circinatum Pursh.

Lowden Ranch, 2¾ miles so. of Lewiston,
Trinity Co. 1600 ft.
E.R. Johnson 17 Oct. 1930

H-1587 G-932

Arctostaphylos viscida Parry.

Lowden Ranch, 3 miles so. of Lewiston,
Trinity Co. 1600 ft.
E.R. Johnson 17 Oct. 1930

H-1588 G-933

Acer macrophyllum Pursh

5 miles west of Towerhouse on the Redding to Weaverville Road,
Trinity Co. 1200 ft.
E.R. Johnson 17 Oct. 1930

H-1589 G-934

Quercus chrysolepis Liebm.

5 miles above Towerhouse on the Redding to Weaverville Road,
Trinity Co. 1200 ft.
E.R. Johnson 17 Oct. 1930

H-1590 G-935

Photinia arbutifolia Lindl.

3 miles below Whiskeytown on the Redding to Weaverville Road, 1000ft±
Trinity Co.
E.R. Johnson 17 Oct. 1930

H-1591 G-936

Cornus nuttallii Aud.

10 miles above Towerhouse on the
Redding to Weaverville Road,
Trinity Co. 1500 ft.
E.R. Johnson 17 Oct. 1930

H-1592 G-937

Quercus lobata Nee

9 miles s.e. of Red Bluff, on
highway no. 99-E.
Tehama Co. 250 ft El.
E.R. Johnson 18 Oct. 1930

H-1593 G-938

Acer negundo californicum Sarg.

Canada de las Uvas, 3 miles above
Grape Vine Station,
Kern Co. 2000 ft.
E.R. Johnson 19 Oct. 1930

H-1594

Acer glabrum Torrey

Canyon Creek Meadows,
Trinity Co.
E.R. Johnson 12 Oct. 1930

H-1595

Philadelphus lewisii californicus Gray

Canyon Creek at Dedrick,
Trinity Co. 2500 ft.
E.R. Johnson 11 Oct. 1930

H-1596

Prunus demissa (nutt.) Dietr.

Canyon Creek Meadows,
Trinity Co. 5000 ft.
E.R. Johnson 12 Oct. 1930

H-1597

Picea breweriana Wats.

Between Canyon Creek Meadows and Lakes
Trinity Co. 6000 ft.
E.R. Johnson 13 Oct. 1930

H-1598

Cornus californica Camey.

Canyon Creek Meadows,
Trinity Co. 5000 ft.
E.R. Johnson 13 Oct. 1930

H-1599

Pseudotsuga taxifolia (Lamb.) Britt.

Canyon Creek Meadows,
Trinity Co. 5000 ft.
E.R. Johnson 12 Oct. 1930

H-1600

Tsuga mertensiana (Bong.) Sarg.

Canyon Creek at Lakes,
Trinity Co. 6000 ft.
E.R. Johnson 13 Oct. 1930

H-1601

Quercus garryana breweri Jepson

hillsides above Canyon Creek Meadows,
Trinity Co. 5000 ft.
E.R. Johnson 14 Oct. 1930

H-1602

Corylus rostrata californica A.DC.

between Dedrick and Canyon Creek Meadows,
Trinity Co. 4000 ft.
E.R. Johnson 14 Oct. 1930

H-1603 G-929

Prunus subcordata Benth.

edge of field at Lowden Ranch,
3 miles so. of Lewiston,
Trinity Co. 1800 ft.
E.R. Johnson 17 Oct. 1930

H-1604

Prunus demissa (Nutt.) Dietr.

2 miles south of Cuyamaca Lake,
San Diego Co.
B.D. Stark 14 June 1930

H-1605

Aesculus californica (Spach.) Nutt.

Bouguet Canyon,
Los Angeles Co.
B.D. Stark 28 June 1930

H-1606

Ceanothus crassifolius Torr.

Hidden Canyon, Santa Ana Mts.
Riverside Co. El.
B.D. Stark 21 Feb. 1929

H-1607 G-839

Lycium andersonii Gray.

1- 2 ft.
Oro Grande, San Bernardino Co.
El.
B.D. Stark 20 May 1930

H-1608 G-840

Encelia frutescens Gray.

1- 2½ ft. no ray florets.
1/2 mi. W. Baker. San Bernardino Co.
El. 1100 ft.
B.D. Stark 20 May 1930

H-1609 G-841

Brickellia incana Gray.

1- 2½ ft.
12 miles west of Baker, Mojave Desert.
San Bernardino Co. El.
B.D. Stark 20 May 1930

H-1610 G-842

Lycium pallidum Miers.

1- 2½ ft. gravel soil.
8 miles west of Shoshone,
Inyo Co. El.
B.D. Stark 21 May 1930

H-1611 G-843

Encelia actoni Elmer.

1- 2 ft.
10 miles north of Shoshone,
Inyo Co. El.
B.D. Stark 20 may 1930

H-1612 G-844

Viguiera reticulata Watson

18 inches. Gravel Wash,
Death Valley,
Inyo Co. El.
B.D. Stark 21 May 1930

H-1613 G-845

Menodora spinescens

1- 2½ ft.
10 miles north of Ryan,
Inyo Co. El. 3000 ft.
B.D. Stark 21 May 1930

H-1614 G-846

Peucephyllum schottii Gray.

5 ft. rocky soil.
10 miles south of Ryan,
Inyo Co. El. 3000 ft.
B.D. Stark 21 May 1930

H-1615 G-847

Atriplex hymenelytra (Torr.) Wats.

gravel washes and banks.
10 miles south of Ryan,
Inyo Co. El. 3000 ft.
B.D. Stark 21 May 1930

H-1616 G-848

Salvia carnosa pilosa ( )
Jepson

1- 2 ft.
near Cima,
San Bernardino Co. El.
B.D. Stark 22 May 1930

H-1617 G-849

Condalia spathulata Gray.

12 ft.
Chuckawalla,
Riverside Co. El.
B.D. Stark 25 May 1930

H-1618 G-850

Parosela schottii (Torr.) Heller.

3- 5 ft.
Chuckawalla Desert,
Riverside Co. El.
B.D. Stark 25 May 1930

H-1619 G-851

Cassia armata

2- 4 ft.
Chuckawalla Valley,
Riverside Co. El.
B.D. Stark 25 May 1930

H1620 G-852

Larrea tridentata glutinosa (Rydb.)
Jepson

5- 8 ft.
Chuckawalla Valley,
Riverside Co. El.
B.D. Stark 25 May 1930

H-1621 Trixis californica Kellogg G-853

1- 2 ft.
Chuckawalla Valley,
Riverside Co. El.
B.D. Stark 25 May 1930

H-1622 G-855

Franseria eriocentra Gray

2- 3 ft.
20 miles south of Cima,
San Bernardino Co. El. 4000 ft. ?
B.D. Stark 22 May 1930

H-1623 G-857

Comarostaphylis diversifolia Greene

7- 12 ft. narrow canyon bottoms.
Rancho Santa Fe,
San Diego Co. El. 150 ft.
B.D. Stark 13 June 1930

H-1624 G-858

Adolphia californica Watson.

1- 3½ ft. red adobe soil.
Rancho Santa Fe,
San Diego Co. El. 150 ft.
B.D. Stark 13 June 1930

H-1625 G-860

Ceanothus verrucosus

8 ft. wide canyon bottoms.
South of Del Mar,
San Diego Co. El.
B.D. Stark 13 June 1930

H-1626 G-861

Ceanothus crassifolius Torr.
Det. HE. McMinn.

6- 8 ft.
small hill northeast of Lakeside,
San Diego Co. El. 500 ft.
B.D. Stark 14 June 1930

H-1627 G-862

Ceanothus cyaneus Eastwood.

6- 12 ft. Tipolythe.
Lakeside,
San Diego Co. El. 400 ft.
B.D. Stark 14 June 1930

H-1628 G-863

Rhamnus crocea pilosa Trelease.

3 ft.
Lakeside,
San Diego Co. El.400 ft.
B.D. Stark 14 June 1930

H-1629 G-864

Chamaebatia foliolosa australis Bdg.

2- 6 ft. north slope
2 miles west of Tecate,
San Diego Co. 2000 ft. El.
B.D. Stark 14 June 1930

H-1630 G-865

Ribes roezlii Regel.

2- 4 ft. under oaks.
Pine Canyon,
Los Angeles Co. El. 4000 ft.
B.D. Stark 28 June 1930

H-1631 G-866

Ribes quercetorum Greene

2 to 4 ft. El.4000 ft.
Pine Canyon, Los Angeles Co.
B.D.Stark 28 June 1930

H-1632 G-867

Rhus trilobata Nutt.

2 to 6 ft.
deep canyon bottom, Lobo Canyon,
Los Angeles Co.
B.D.Stark 29 June 1930

H-1633 G-868

Ceanothus cuneatus (Hook.) Nutt.
Det. H.E.McMinn 1930
6 to 8 ft.
north of Warners Hot Springs,
Riverside Co.
B.D.Stark 2 July 1930

H-1634 G-869

Garrya flavescens Watson

4 to 8 ft.
San Felipe Valley,
San Diego Co.
B.D.Stark 2 July 1930

H-1635 G-870

Prunus fremontii Watson

San Felipe Canyon,
San Diego Co.
B.D.Stark 2 July 1930

H-1636 G-871

Condalia parryi (Torr.) Weberb.

6 to 10 ft.
San Felipe Canyon,
San Diego Co.
B.D.Stark 2 July 1930

H-1637 G-872

Lycium cooperi Gray
3 to 4 ft.
San Felipe Canyon,
San Diego Co.
B.D.Stark 2 July 1930

H-1638 G-873

Ceanothus oliganthus orcuttii (Parry)

6 to 8 ft. Det. H.E.McMinn
Old Banner Grade,
San Diego Co. El.3500 ft.
B.D.Stark 3 July 1930

H-1639 G-874

Amelanchier alnifolia Nutt.

10 to 15 ft.
Old Banner Grade,
San Diego Co. El. 3500 ft.
B.D.Stark 3 July 1930

H-1640 G-875

Ceanothus austromontanus Abrams.

1 to 2 ft. Det. H.E.McMinn
Inspiration Point, Cuyamaca Lake,
San Diego Co.
B.D.Stark 3 July 1930

H-1641 G-876

Parosela spinosa (Gray) Heller

6 to 10 ft.
foot of Mountain Springs Grade,
Imperial Co. El. 0 approx.
B.D.Stark 4 July 1930

H-1642 G-877

Salvia vaseyi ( ) Jepson.

2 to 3 ft.
Mountain Springs Grade,
San Diego Co. El.
B.D.Stark 4 July 1930

H-1643 G-880

Bernardia myricaefolia Watson

Agua Caliente Hot Springs,
Colorado Desert,
San Diego Co. El.
B.D.Stark 12 July 1930

H-1644 G-884

Ceanothus cyaneus Eastwood
Det. H.E.McMinn.
6 to 10 ft. (TOPOTYPE)
hill north of Lakeside, (
San Diego Co. El.
B.D.Stark 21 July 1930

H-1645 G-885

Cassia covesii Gray

12 to 15 inches.
Colorado Desert, between Mason Valley
and Agua Caliente Hot Springs,
San Diego Co. El.
B.D.Stark 21 July 1930

H-1646 G-886

Ceanothus palmeri Trelease.
(C. spinosus palmeri(Trel.) Jeps.)
Det. H.E.McMinn

4 to 6 ft.
Cuyamaca Mts.,
San Diego Co. El.
B.D.Stark 7 Aug. 1930

H-1647 G-887

Nolina bigelovii (Torrey) Watson

2 to 6 ft.
Between Mountain Springs and Jacumba,
San Diego Co. El. 2500 ft.
B.D.Stark 7 Aug. 1930

H-1648 G-888

Olneya tesota Gray

Between San Felipe and Borego Valley,
San Diego Co.
B.D.Stark 15 Aug. 1930

H-1649 ----

Fallugia paradoxa Endl.

10 miles east of Cima,
San Bernardino Co. ½ El. 4000 ft. ?
B.D.Stark 22 May 1930

H-1650 G-838

Beleperone californica Benth.

3 to 8 ft.
Chuckawalla Valley, Colorado Desert,
Riverside Co. El.
B.D.Stark 25 May 1930

H-1651 ---

Photinia arbutifolia Lindl.

Upper Avalon Canyon,
Catalina Island, El.
E.R. Johnson 30 Jan. 1930

H-1652 G-824

Coleogyne ramosissima Torrey

2 to 3 ft. sandy soil
Morongo Valley,
Riverside Co. El. 2500 ft.
B.D.Stark 11 May 1930

H-1653 G-828

Lepidium fremontii Watson

2 to 3 ft.
Twenty-nine Palms,
San Bernardino Co. El.
B.D.Stark 4 May 1930

H-1654 G-823

Crossosoma bigelovii Watson

2 to 3 ft.
Morongo Pass,
Riverside Co. El.
B.D.Stark 4 May 1930

H-1655 (G-652)

Chrysothamnus nauseosus gnaphalodes (Greene) Hall.
Det. H.M.Hall
specimen from seed grown plants in nursery, from G-652, collected in San Gabriel Mts., Wrightwood, Los Angeles Co., by B.D.Stark

the Herbarium specimens collected 1 Dec. 1930.

H-1656 (G-736)

Ericameria parishii (Greene) Hall.
Det. H.M.Hall 1931
Herbarium specimen collected 1 Dec.1930 in nursery, from plants grown from G-736, which came from Palomar Mt., San Diego Co
By B.D.Stark

H-1657 G-656

Lycium andersonii Gray

Torrey Pines Park San Diego Co.
12/20/29
B.D.Stark

H-1658 G-585

Ceanothus incanus Torrey and Gray
Det. H.E.McMinn
listed under
6 to 10 ft.
10 miles southof Booneville, Mendocino Co.
B.D.Stark 22 July 1929

H-1659 G-637

Sphaeralcea orbiculata Greene.

Cactus Flats, San Bernardino Co.
29 Sept. 1929
~~B.D. Stark~~

H-1660 - G-675.

Cornus californica C.A.Mey

Cuyamaca Mts, San Diego Co.
B.D. Stark 27 Dec 1929

H-1661 G-660.

Salvia clevelandii Gray

Torrey Pines Park, San Diego Co.
B.D. Stark. 28 Dec. 1929.

H-1662. G-815.

Eurotia lanata (Pursh) Mog.
between Cajon Pass & Victorville, western Mojave Desert, San Bernardino Co.
B.D. Stark — 4/29/30.

H-1663. G-672.

Symphoricarpos mollis
1-4 ft high.
high valley in oak grove.
Cuyamaca mts.,
San Diego Co. 3000 ft.
B.D. Stark. 27 Dec. 1929.